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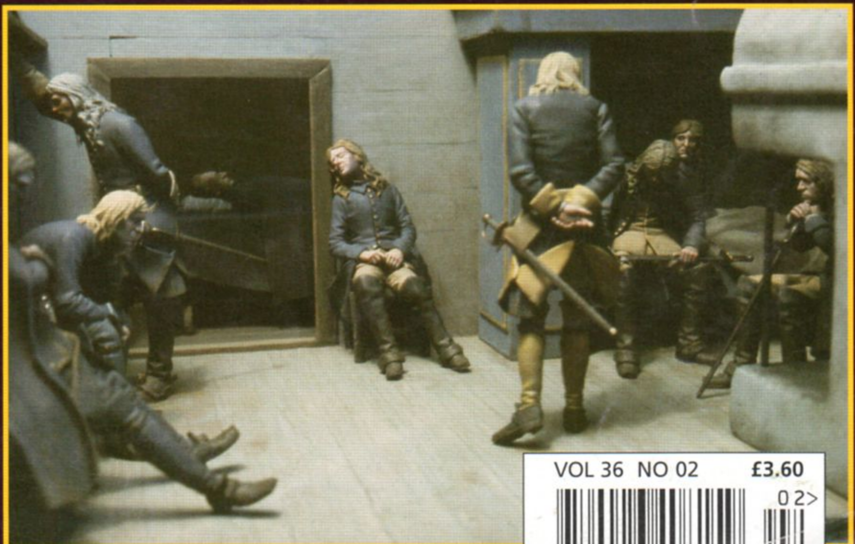

THE ROYAL FUSILIERS

The City of London's Own Regiment

VOL 36 NO 02 £3.60
02>

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COVER: The up-armoured Challenger 2 dominates our cover this issue. There's a 'walk round' of the vehicle beginning on page 26. Inside Mike Blank's first boxed diorama of the death of King Charles XII of Sweden is also shown - article begins on page 18.

RIGHT: Adrian Hopwood's 'Half Armoured' Samurai Bowman - a White Models' 90mm figure. Assembling and painting the kit parts is shown in 'The Hunter' which begins on page 22.

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- **Would secretaries of clubs and societies please allow a three-month lead time for time-sensitive notices. Please note: under no circumstances will copy be accepted by telephone. All notices must be in writing, by letter or e-mail.**

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Almada's 10th Model Show

The Associação de Modelismo de Almada (AMA) will host the 10th Model Show at Oficina da Cultra in Almada, Portugal from 11th to the 14th May 2006. All kinds of models will be represented including, military vehicles, figures, ships, trains and layouts, aircraft, cars, trucks and even slot cars. For further information contact Pedro Figueira, Apartado 531, Cova da Piedade, 2801-906 Almada, Portugal. amalmada@netvisao.pt

British Model Soldier Society

The Annual Show presented by the British Model Soldier Society is being held this year on Saturday 22nd April in the Edward and Alexandria Suite, The Royal National Hotel, Russell Square, London between 10am and 4pm. This is a popular venue with easy access and car parking at reasonable rates on site. There will be the now traditional mix of trade stands, demonstrations, displays and competitions so that there really is something to attract everyone, whatever their special interest. The latest figures in the Members' Collection range will be on sale at the Support Services Stand. Once again, the competitions will be open to all military modellers with gold, silver and bronze awards. These classes are arranged so that a modeller should be able to find an appropriate class for any model. There are classes for single unconverted foot figures, single unconverted mounted figures, busts, vignettes, groups/dioramas and conversions or scratch built figures. There is a class for AFVs, softskin vehicles, artillery without figures and one for non-military entries.

To enter in the Junior class entrants must be under age 16 on the day of the competition. Entries in this class may be single figures, groups (including wargame figures including fantasy) or vehicles, etc. Each junior entrant will receive a foot figure from the Members' Collection range. For further information, please contact Michael Creese Tel: 01728 602 746

Welling 2006

Welling Model Club has great pleasure in inviting all to attend 'Welling 2006' to be held at the Falconwood Community Centre, The Green, Welling, Kent on Saturday 29th April. The doors will be open from 10am - 4.30pm with admission at £1 for adults with juniors and OAPs at 50p. There will be over 20 open competition classes including juniors, for Figures, AFVs, Flats, Sci-Fi, Aircraft, Cars, Vignettes, Dioramas, Conversions and Scratch Built models with competition entries at 50p. In addition to the competition, club displays and trade stands, there will be a bring & buy sale, raffle prizes, a special figure raffle and refreshments. The 2006 raffle prize will be a beautifully finished flat set 'Bengal artillery gun team from the Indian mutiny'. Don't miss it! For more details and the latest updates on the show visit www.royhuntminiatures.com/ or checkout http://sky.prohosting.com/royhunt/ The Welling show features some of the best in British modelling, with expert demonstrations by top modellers and it's sure to have something for everyone. The last show was fully booked so if you are a trader please don't delay in securing your stand; club stands are, of course, free. Trade stands are just £10 per six feet. Cheques should be made payable (in advance please) to Welling Model Club. Any correspondence should be sent to: Roy Hunt, 9 Joyce Page Close, Charlton, London SE7 8TA. Tel/Fax: 020 8305 2868. Royhunt.models@virgin.net If you need a map to get there, just send an SAE to the contact address or request one by e-mail for a great day of modelling.

ENCANTA MEDIA

Under New Management!

The assets of ***Military Modelling***, along with our eight sister titles in the group, was bought by Encanta Media Ltd from Highbury House Communications on 20th January last. This is excellent news for the future of ***Military Modelling*** and other magazines in the group because Encanta Media Ltd is a specialist magazine publisher who does not produce any other type of publications and realizes how important hobby magazines are to their thousands of readers. Encanta Media Ltd has firm plans to develop all nine former Highbury titles much further and to the direct benefit of the enthusiasts who read them. You will notice new names added to our masthead on the Contents' page and Owen Davies as Managing Director joins us. With fresh and experienced hands at the helm we will maintain and improve our market share. We look forward to continue producing your favourite magazine throughout the rest of 2006 and onwards into the future.

I'd like to thank everyone who rallied round with support over the past month and, in the light of current events, I can't resist the remark ... *Watch this space!*

Ken Jones

York Action Figure Show

The 1st York Action Figure Show will be held on Sunday, 19th March 2006 at Bishopthorpe Village Hall, near York Racecourse. The show is for enthusiasts of all 1:6 scale figures, Dragon, Blue Box, Sideshow, Action Man, etc., and opens at 10am, running until 4pm. Although a small show, traders will attend. It is the first of its kind in the North and everyone is welcome, admission is £2 and all profits will go to the Burma Star Association. Parking is free throughout the village and the organizers ask that visitors should please park considerately. There is an excellent pub next door to the venue and there will be light refreshments available in the hall. For further information and general enquiries telephone Tony Barton on 01904 709170.

Sword & Lance

Darlington Military modelling Society will present Sword & Lance on Saturday 8th April 2006 at the Arts Centre, Vane Terrace in Darlington. The doors will be open 10.30am to 4.30pm. Featured will be model and militaria displays, trade stands and demonstrations by Brian Snaddon on painting faces and Lee Lloyd on soldering techniques. The popular competition run in accordance with the 'Open System' will be held with sections for Miltary Figures, Aircraft and Vehicles, Vignettes, Dioramas, Miscellaneous and Juniors. There is a licenced bar at the Arts Centre, plus hot and cold refreshments. For further details please contact Colin Holmes, 127 Dinsdale Crescent, Darlington, Co. Durham DL1 1EZ. Tel: 01325 489801. colin.holmes@whsmithnet.co.uk

DESPATCH

Readers' Letters and E-mails

- **The Editor welcomes readers' letters and e-mails for publication which must always be accompanied by the writer's full name and address. The address will be published in full if the letter or e-mail is interpreted as a request for information to the readership. Otherwise, only the writer's full name will be published.**

- **Letters and e-mails are not, under any circumstances, altered or severely edited; however, they may be shortened because of space limitations. The Editor is not necessarily in agreement with the views expressed in published readers' correspondence.**

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Crow Woman

Dear Sir,
I read Mr. Hopwood's article on the PiLiPiLi Crow woman (***Military Modelling*** Vol.35 No.15) and I want to add some comment. My wife and I have researched in the history and culture of the Plains Indians for over 20 years. This has lead to friendly relations with Native Americans, especially of the Lakota and Crow, as well as to cooperation with historians in Germany, England and the USA.

Mr Hopwood did a very fine painting job and the presentation is excellent. What disturbs me, however, is the way he describes the Indian culture as 'stone age'. It is correct, that the Indians couldn't smelt iron, but they had a highly developed democratic society and a sophisticated social system, the white society of that time could only dream of. They didn't know racism and the education of Indian children was up to the modern standard of pedagogic. If you investigate the behaviour of the white conquerors and the Indians without pre-justice, you will recognize that the whites were the barbarians and not the Indians. Actually, nearly all violent actions were started by the whites.

Mr Hopwood stated that the Crow Indians lived in Wyoming. That is not correct. The Crow separated from the semi-sedentary Hidatsa in 1700 who lived in what is today North Dakota and moved to what is today Montana. The Crow, as nomadic people, wandered also in parts of Wyoming, but the centre of the Crow territory was Montana and still is today. (1)

What the author describes as the skirt is, in fact, a blanket wrapped over the elk teeth dress. The Crow women's dresses were in one piece, mainly blue, red or green trade cloth, with the collar mostly in red ore blue.(2) The blankets of the Crow were mainly from the Spanish ore Navajo via trade with the Shoshone; they also used the so-called 'Hudson's Bay Trading blanket'.(3)

What the author describes as a lance is, in reality, a warrior's society regalia. The Crow had two warrior societies, the Lumpwoods and the Foxes which were strong rivals. Even the women took part in this rivalry and proudly displayed their husband's symbols as leaders of one of the societies.(4)

The figure represents a Crow woman around 1880, when the Crow had overtaken the horse decorations from the Nez Perce, but of course you can also date it around 1910.(5)

It should be mentioned that the Crow Fair came to a sudden halt in 1923, when the US Government ordered the killing of all horses of the Indian tribes including the Crow. By this action, around 40,000 - 60,000 Indian horses were killed. It took place until 1934, when President Roosevelt changed the destructive and oppressive Indian politics of his predecessors. One measure was the re-establishment of the Crow Fair, which still exists today.

The Fox warrior is, of course, as the author says from another period and another era.

Bruno Schmäling

Notes in text: (1) Joseph Medicine *Crow, From the heart of the Crow Country.* (2) Susan Jennys, *Plains Indian Women's Dresses.* (3) Colin Taylor, *Crow Rendezvous, the Material Culture of the Crow Indians.* (4) Colin Taylor. (5) Frank B. Linderman, *Pretty Shield, Crow Medicine Woman.*

Spring Thing

Dear Sir,
In reply to Mr White's query on suspension units for M3 and M4 medium tanks, these are interchangeable, but only as complete units which includes the return roller.

The reason lies in the type of spring used, a volute type chosen for its ease of manufacture and reliability - not to mention cheap! If you take a square sheet of cardboard, cut it diagonally to form two triangles, then roll each up tightly, you end up with two volute spring shapes. If the vehicle you have designed the spring for (M2, M3, M4 series) gets heavier the spring has to be made stronger. With a volute spring you can either make the material that the spring was made out thicker (makes it harder to roll and increases the diameter of the spring and, therefore, the vehicle width) or make the depth of the material greater, which is pretty well what they did. This means that the height of the suspension unit increases. If the return roller stays where it is then the track starts to jam on the bottom of the sponson - so shift the roller to the rear. The overall height of the unit then remains the same. The outer frame is also made stronger and the top no longer has the roller mount integrally cast into it.

Late model M3s had rear mounted return rollers and early M4s had M3 suspension units and a trail of busted springs, an item not easy to change without lots of effort and special tools. As to when the various types of skid were introduced much depends on when the old supply was used up at the particular factory. Mr Hunnicutt may be able to help you there!

On another subject, not all command tanks lost their guns. It depended on how much extra equipment had to be installed. An extra radio would fit into the sponson if you got rid of some ammunition - or the hull gunner. If you need a map table as well, the main gun breech is definitely going to be in the way. Some tanks retained the 75mm barrel welded to the mantlet while others had a section of pipe of the right diameter installed.

I can also confirm that Bren guns always drooped to the rear if carried by the barrel handle, the butt so placed as to strike the knee of the man behind when on night patrol. The centre of gravity is about where the magazine feed was if I remember rightly. Good as it was, it had the enduring habit when used as an AA weapon of feeding hot cartridge cases down the arm of the firer's battledress jacket which didn't improve his aim. On Universal carriers with the post mounts the cases fell down the back of the neck of the crew in the front compartment, distracting them from such important tasks as driving the carrier on the road. Loose cases often jammed the steering rods at times when good manoeuvring was important to the well-being of the vehicle and its occupants. Such is life.

Malcolm Dunn

The problem of scattered ejected spent brass from a Bren gun mounted on a high post or AA mounting was solved by fitting a canvas bag over the ejection port on the bottom of the gun body. Ed.

Model Colour

Dear Sir,
An idea hit this 1970s vintage reader of ***Military Modelling:*** would you possibly reissue (and update) that special one-off magazine published around 1975 called *Model Colour* (I think?)

I've lost mine, but this guide to model painting provided a compendium of techniques plus a colour chart showing how new shades could be mixed. The chart had printing limitations and some photos were black and white, but because colour printing is easier today, a reissued *Model Colour* could be in full colour. It could also compare some techniques of yesterday with today's.

Peter Lynch

Model Colour was produced by ***Military Modelling's*** *then sister title* Scale Models Magazine. *The idea and concept of a nostalgic 30-year old trip into how it was then may have only limited appeal to some readers. However, the basic concept of 'colour' for military modellers is worth investigating further. Ed.*

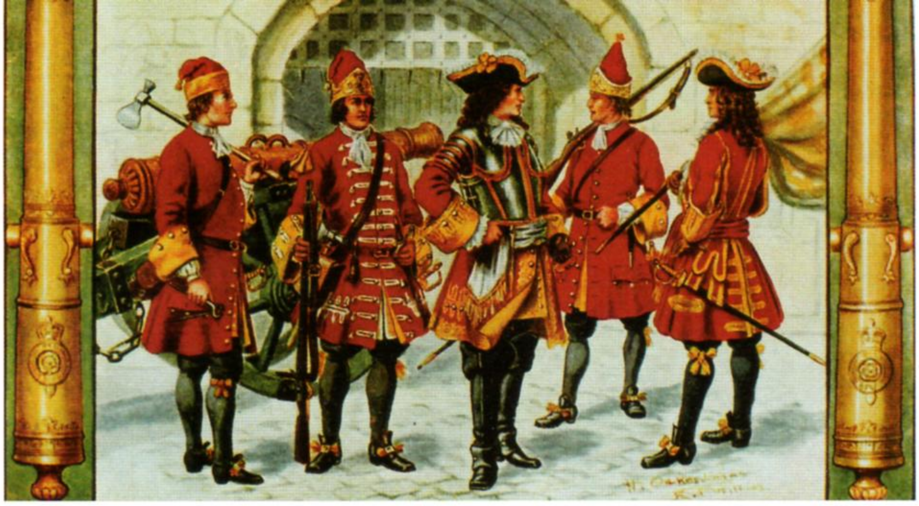
Carr's Topsoil

Dear Sir,
Being a loyal reader of ***Military Modelling*** since 1974 I wonder if you can help me with a small problem? Some years ago I purchased the excellent Carr's Topsoil -a very versatile and useful product.

Alas, I've been unable to get anymore and I wonder if you can provide me with a supplier or a similar product. This is a khaki-coloured dry product which when mixed with water results in a porridge-like paste and when put into an airtight container it has a lengthy lifespan. The only address I have is Carr's Modelling Products, Unit 5, Centre 88, Elm Grove, Wimbledon, London SW19 4HE. Tel: 01 946 5038.

Phil Beveridge

The address you quote is still noted in lists of various model manufacturers, however, I think you may have to contact one of our railway modelling brethren for Carr's products. Try C&L Finescale, Cadbury Camp Lane, Clapton in Gorando, Bristol BS20 7SD, Tel: 01275 852027 sales@finescale.org.uk (Topsoil is code: C1038 price £2.50). You can contact C&L Finescale direct or have a look on their Website: www.finescale.org.uk/carrs.html Ed



The Royal Regiment of Fusiliers, or The Ordnance Regiment c.1685-90, from a painting by H. Oakes Jones. Depicted (from left to right) are a miner, grenadier, colonel, fusilier and lieutenant.

Famous Regiments of the British Army

Bob Marrion and Stuart Asquith continue their new series featuring Regiments of the British Army from their origins to 1914 with The Royal Fusiliers (City of London Regiment)

The Royal Regiment of Fusiliers, or The Ordnance Regiment 1685-1751

The Royal Fusiliers was one of the units added to the British Army at the time of the Duke of Monmouth's rebellion, termed 'Our Royal Regiment of Fusiliers' it was assigned the duty of guarding the train of artillery and consisted of 12 companies of fusiliers and one of miners. Contrary to the usual policy of the time, there were no pikemen in the new formation. The regiment was commanded by the Earl of Dartmouth who was also the Master General of the Ordnance.

The Royal Regiment of Fusiliers does not seem to have fulfilled its intended role with the artillery, as it initially served as marines on Royal Navy warships before being sent to Flanders. Subsequently the Regiment was in Ireland with Marlborough at the sieges of Cork and Kinsale, before returning to the Low Countries to take part in the campaigns of King William III 1685-97, where it suffered severely at the battle of Landen 1694 and was greatly distinguished at the siege of Namur 1695.

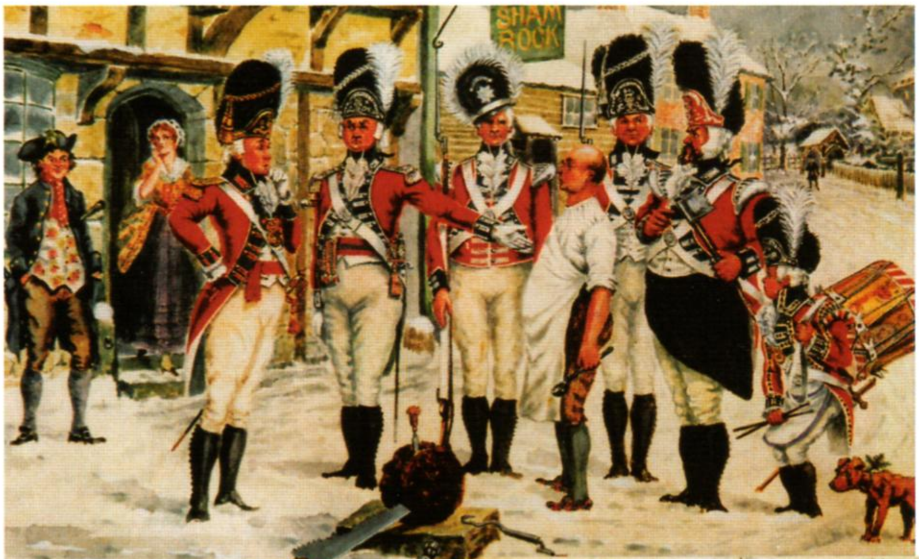
The Regiment was then stationed in the Channel Islands, before serving as marines once more during the Cadiz Expedition 1702. More action followed in the War of the Spanish Succession 1702-14, with the corps fighting at Barcelona 1706 and suffering heavy casualties during the unsuccessful defence of Lerida 1707.

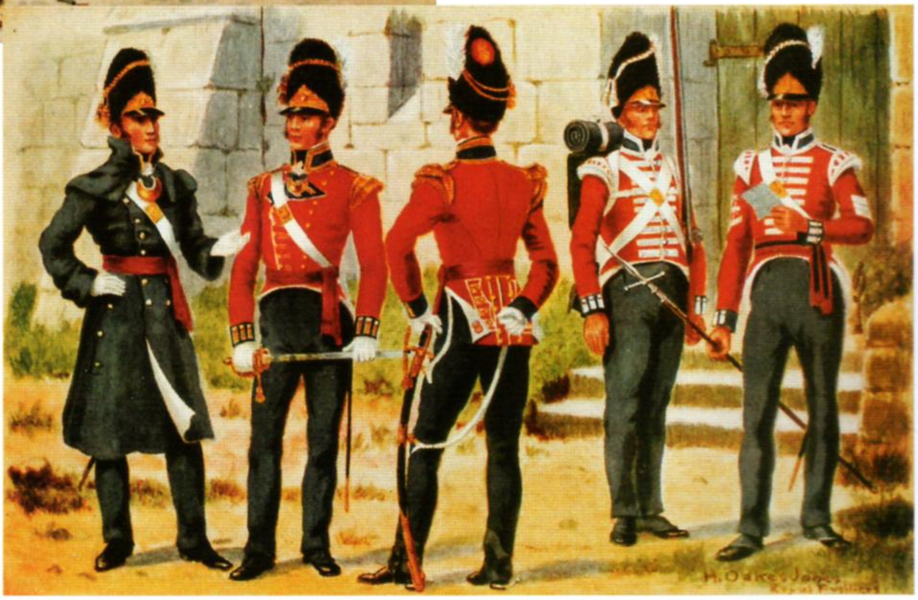
In 1709 the Regiment was in garrison at Tarragona, after which it seems to have in Minorca for several years. In 1718 the Regiment moved from Minorca to Sicily and probably had another tour of duty as marines whilst there. From 1732-49 the Regiment was stationed in Gibraltar.

The 7th Foot (Royal Fusiliers) 1751-1881

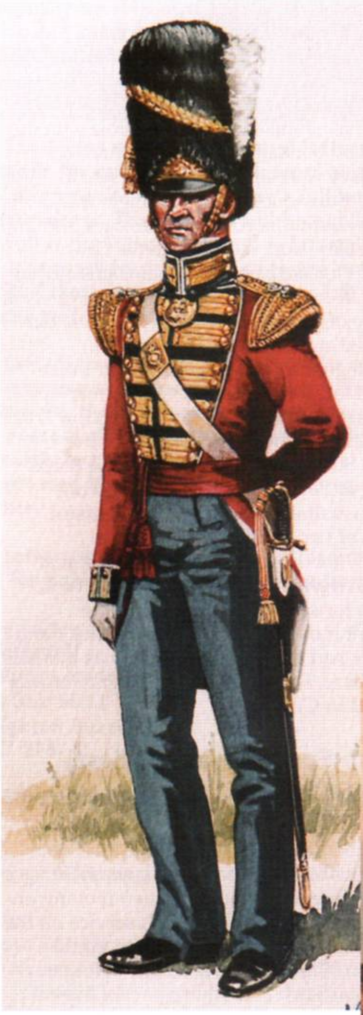
In 1751 the Regiment became the 7th Foot (Royal Fusiliers) and sailed to Canada in 1773, landing at Quebec and then moving on to Montreal. The 7th saw much service on the Great Lakes during the early years of the American War of Independence, before moving to New York and taking part in the later campaigns under Clinton and Cornwallis, fighting at Charleston 1780 and Cowpens 1781, until the end of the conflict.

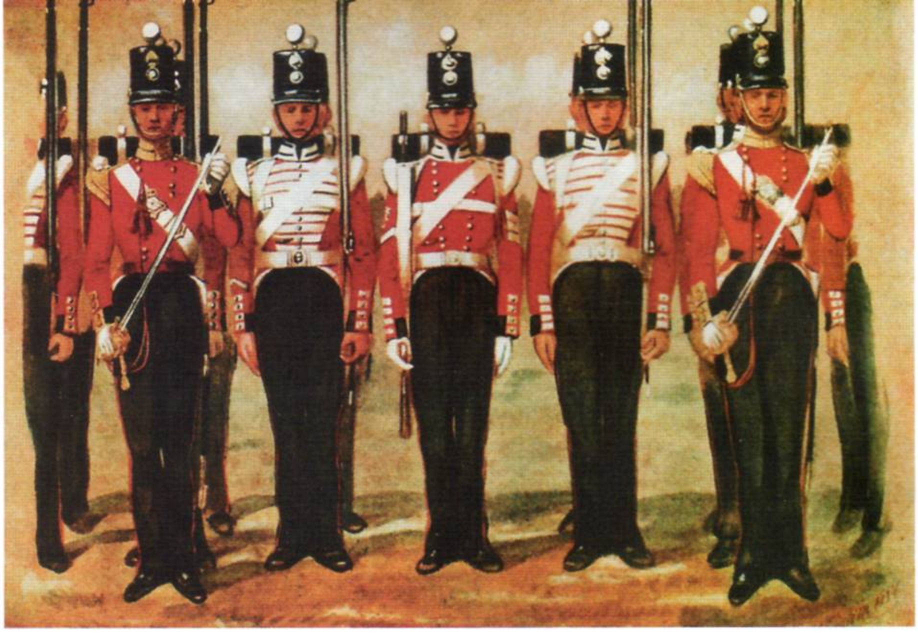
Between 1790 and 1793 the Regiment was on garrison duty at Gibraltar and Quebec, after which it was in Nova Scotia where, for a short time, it was formed into two battalions, which were afterwards re-united as one. From 1802 to 1806 the Regiment was dis-



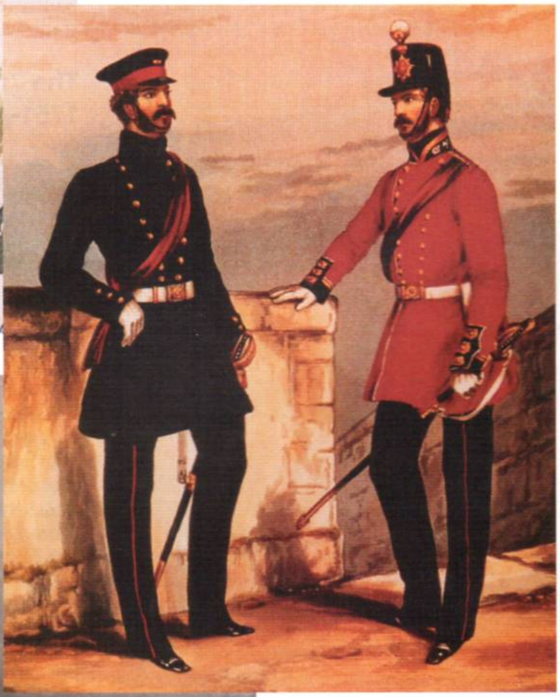


LEFT: Types of the Regiment c.1785, from a painting by H. Oakes Jones.
BELOW: The Royal Fusiliers or 7th Regiment of Foot, 1812-16, from a painting by H. Oakes Jones.





tributed by wings between Bermuda and the Bahamas, and during this period the Peninsular second battalion was raised in Yorkshire from the army of reserve.



The 1st Battalion returned home in 1806 and was subsequently employed in the expedition against Copenhagen 1807, after which it was posted once more to Nova Scotia. The Battalion played a distinguished role in the capture of Martinique in 1809 before being sent back to Halifax and then on to Lisbon.

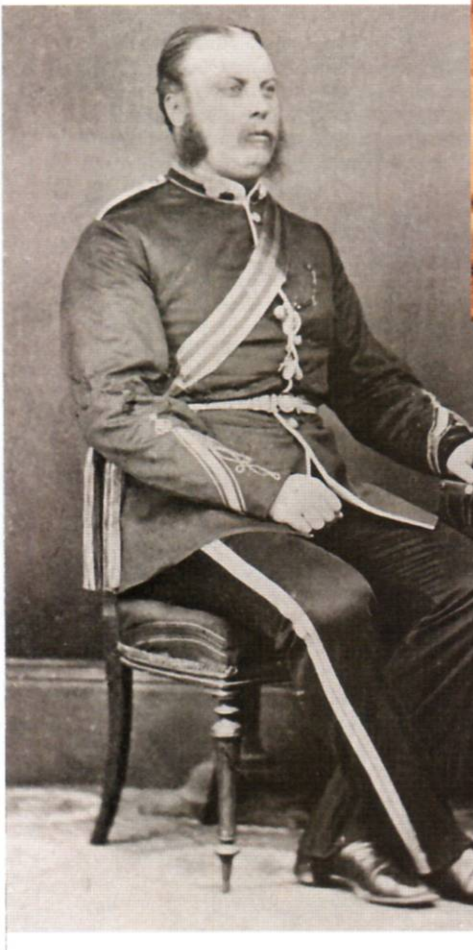
The 2nd Battalion formed part of the reinforcements sent to join Sir Arthur Wellesley's army in Portugal in 1809. The Battalion fought at Talavera 1809 and Busaco 1810 (where the 1st Battalion was also present), before both Battalions took up position in the Lines of Torres Vedras.

The two Battalions fought at Albuhera 1811 and suffered very heavy casualties. As a result, the 2nd Battalion was sent home to recruit, but the 1st Battalion remained in Spain where it served in the sieges of Cuidad Rodrigo and Badajoz 1811 and the victories at Salamanca 1812 and Vittoria 1813. After entering France with the Army the 1st Battalion fought in the various actions in the Pyrenees; Orthes, on the Bidassoa, the investment of Bordeaux and the battle of Toulouse 1814.

From France the Battalion was ordered to North America for service in the War of 1812-14 where it suffered severely in the battle of New Orleans 1815. Returning to the UK at the conclusion of hostilities, the Battalion was sent to Belgium, landing at Ostend on the very afternoon of the battle of Waterloo. Remaining in France with the Army of Occupation until 1818, during which time the 2nd Battalion was disbanded, the Regiment then served in the Mediterranean, Gibraltar, the West Indies and North America.

In 1854 the 7th joined the army being assembled at Scutari, before proceeding to the Crimea as part of the Light Division. The Regiment fought with particular distinction at the Alma and at Inkerman, as well as against the Russian sortie from Sevastopol on 26th October 1854. During the following winter the 7th provided more men for the trenches than any other regiment. The 7th Foot (Royal Fusiliers) won five Victoria Crosses during the Crimean War.

Soon after its return to the UK from the Crimea, the 7th was sent to India, but its services during the Indian Mutiny were confined to Scinde. It took part in the war on the North West Frontier with the Eusoofzye Field Force, returning home in 1870. A 2nd Battalion, raised in 1858 served some time at Gibraltar and in Canada 1866-70 where it was involved in dealing with the Fenian raids. The Battalion returned home in 1867.

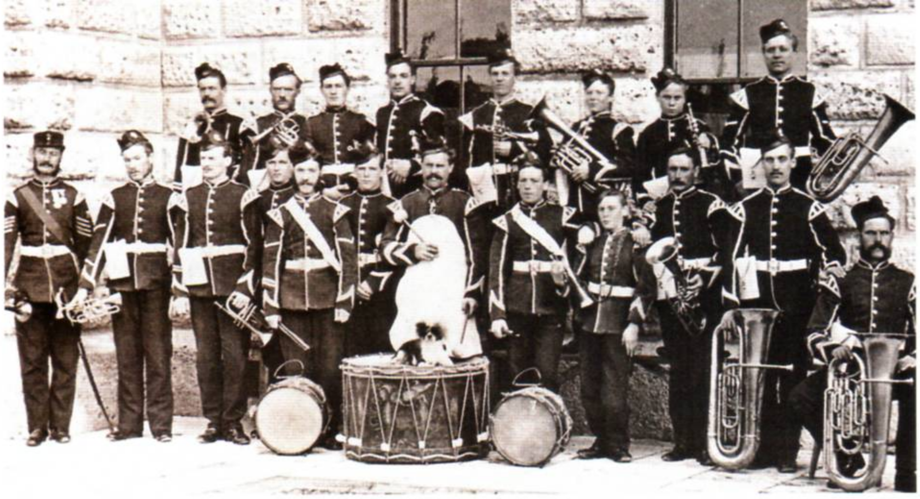


TOP RIGHT: The Royal Fusiliers or 7th Regiment of Foot c.1854, from a painting by Richard Simkin.

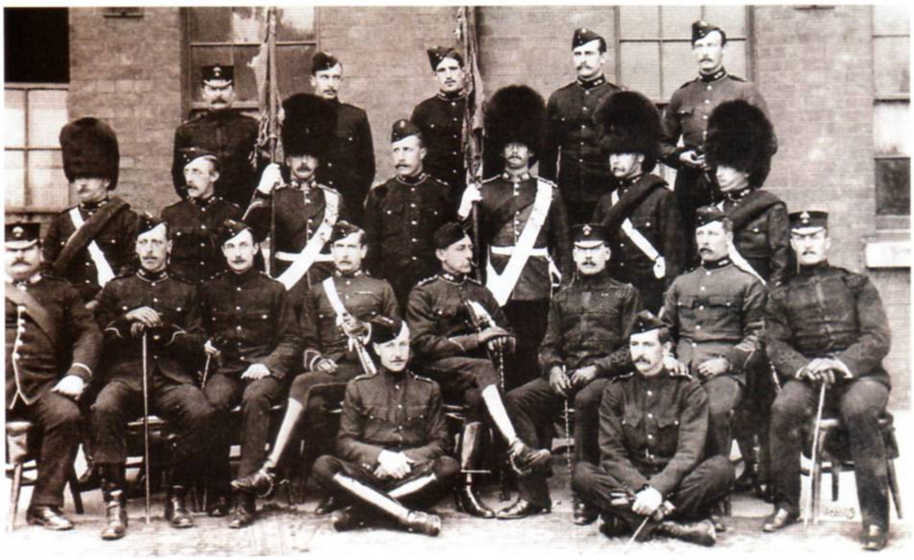
TOP LEFT: An officer of the Regiment c.1825, wearing Full Dress.

INSET ABOVE: Two officers c.1855, wearing the newly-introduced, double-breasted tunic, which lasted about a year before the uniform returned to the single-breasted style. From a print by Ackermann.

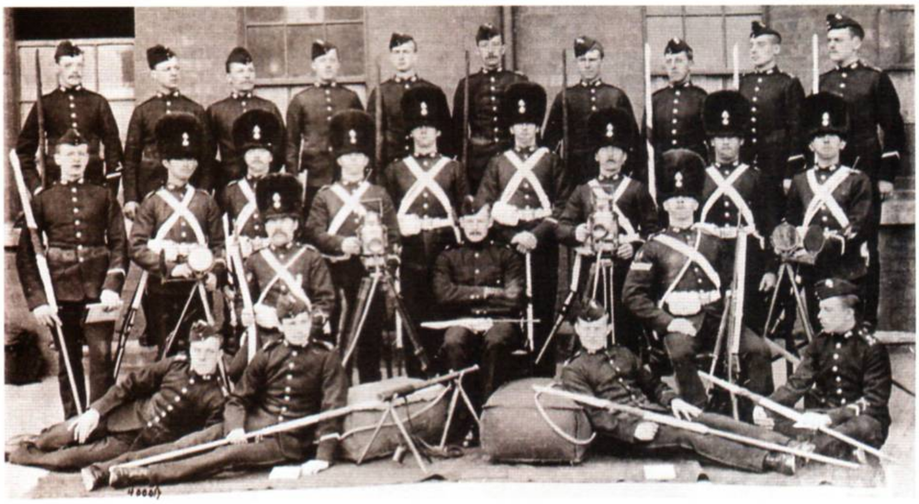
LEFT: A lieutenant of the Regiment wearing the 1868 officers' pattern tunic and the newly introduced (1866) seal-skin cap that replaced the shako.



The Regimental Band c.1874. They are wearing the Other Ranks' 1867-68 pattern tunic and glengarry Undress cap, introduced in 1874.



Officers of the 2nd Battalion in various orders of dress, Victoria Barracks, Belfast 1896. (Courtesy Gary Gibbs.)



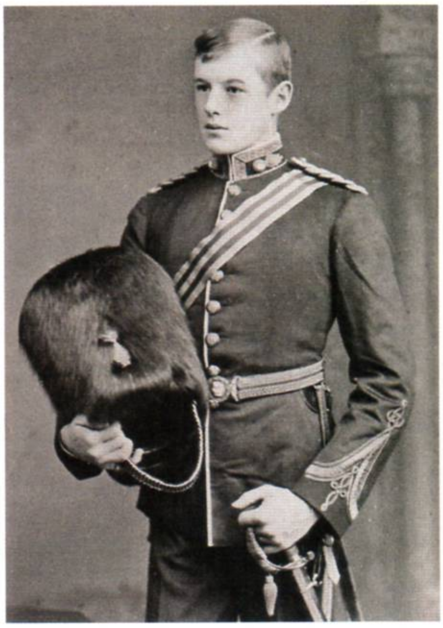
ABOVE: Regimental signallers 1896. BELOW RIGHT: A mounted field officer c.1895.

Royal Fusiliers (City of London Regiment) 1881-1914

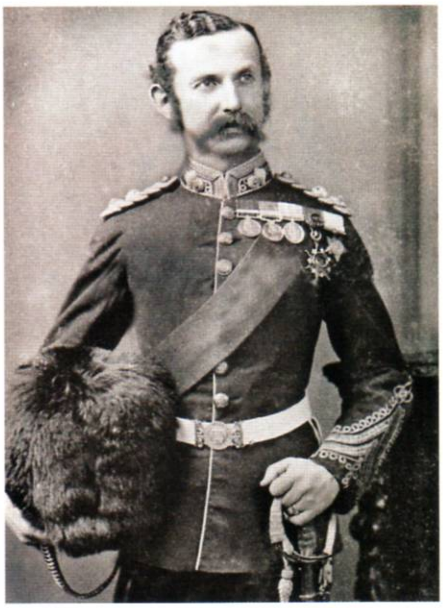
In 1873 the 2nd Battalion sailed to India and took part in the operations in Afghanistan in 1878-80, and in the defence of Kandahar, as well as the battle of Kandahar, before returning home in 1889. As part of the Cardwell Reforms, the 7th Royal Fusiliers received the subsidiary title 'City of London Regiment' and the Regimental Depot was established at Hounslow. The 1st Battalion went to Gibraltar in December 1884 and in 1898 two new battalions were ordered to be added to the Regiment. A 3rd Battalion was formed in 1898 and was at first stationed at Dover, before being sent to Malta.

Service in the Boer War 1899-1902 followed, with action at Colenso and the relief of Ladysmith. In 1904 the 1st Battalion was the only British battalion of any strength to take part in Younghusband's punitive expedition to Tibet, and was present at the assault on Gyangste and the entry into Lhasa.

At the outbreak of the Great War in 1914, the 1st Battalion was at Kinsale, the 2nd Battalion at Calcutta, the 3rd Battalion at Lucknow and the 4th Battalion at Parkhurst.



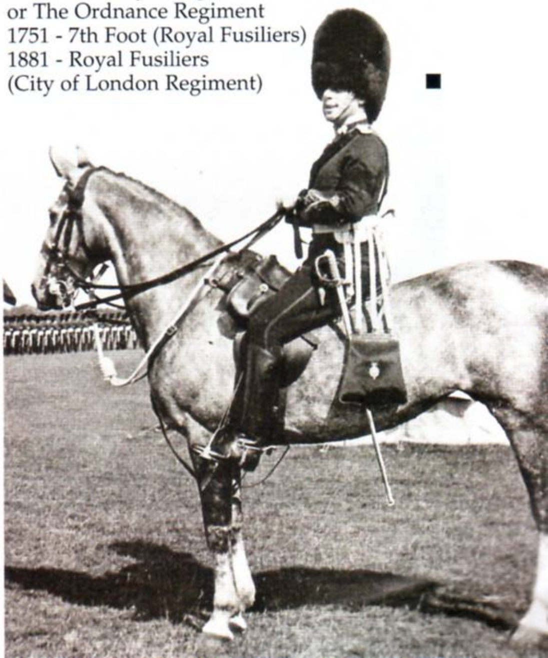
An ensign or 2nd lieutenant in Levee Dress. He carries the officers' bearskin cap adopted in 1892 to replace the former officers' sealskin cap.

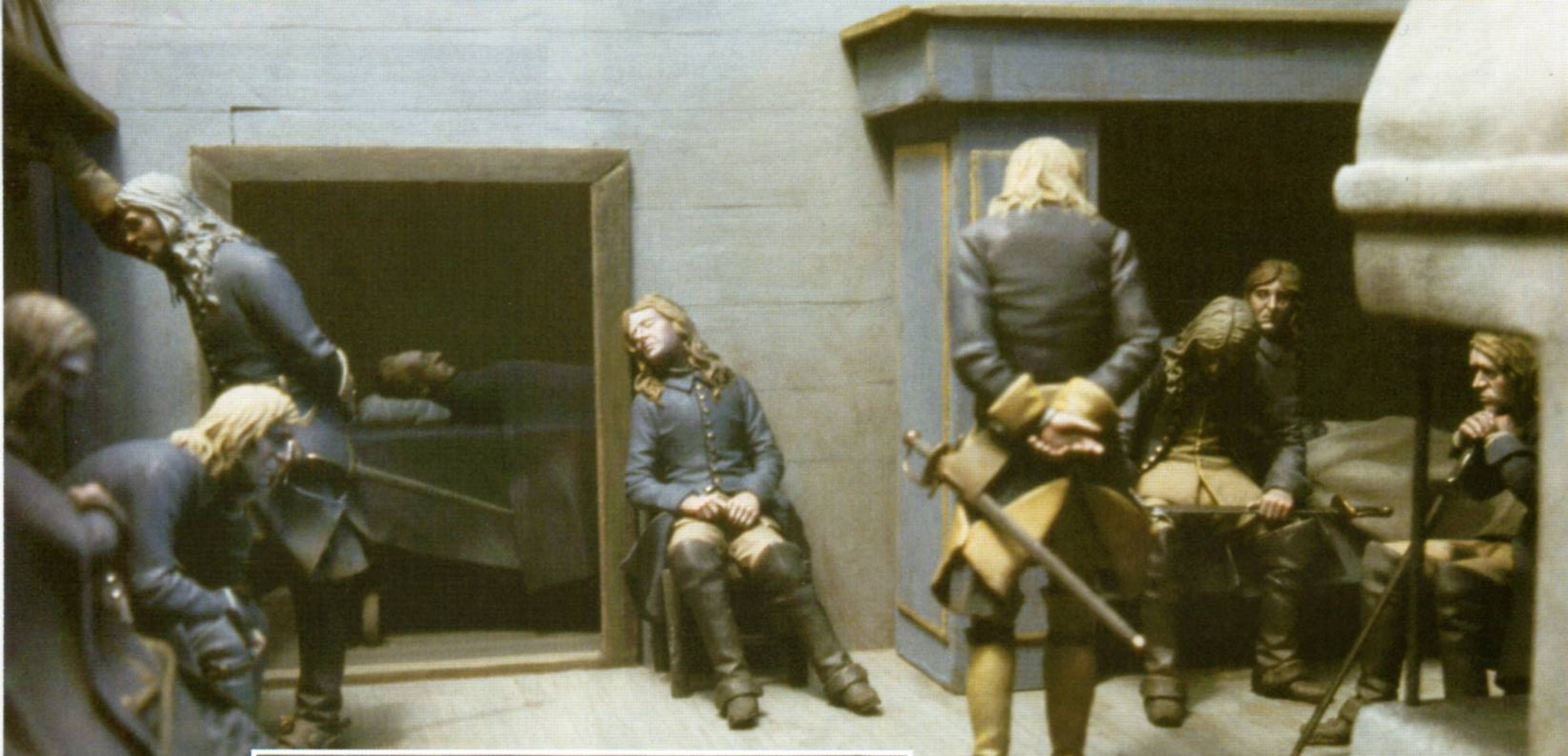


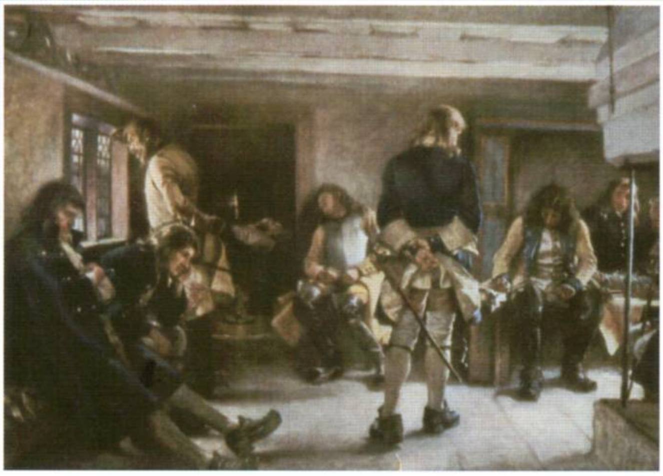
Lieutenant Colonel Sir G. Barton. He became colonel on 1st May 1900 and was later promoted to major general. The officer served in the Ashanti War, Zulu War and Egyptian campaigns of 1882 and 1884-85.

Regimental Titles:

1685 - The Royal Regiment of Fusiliers,
or The Ordnance Regiment
1751 - 7th Foot (Royal Fusiliers)
1881 - Royal Fusiliers
(City of London Regiment) ■



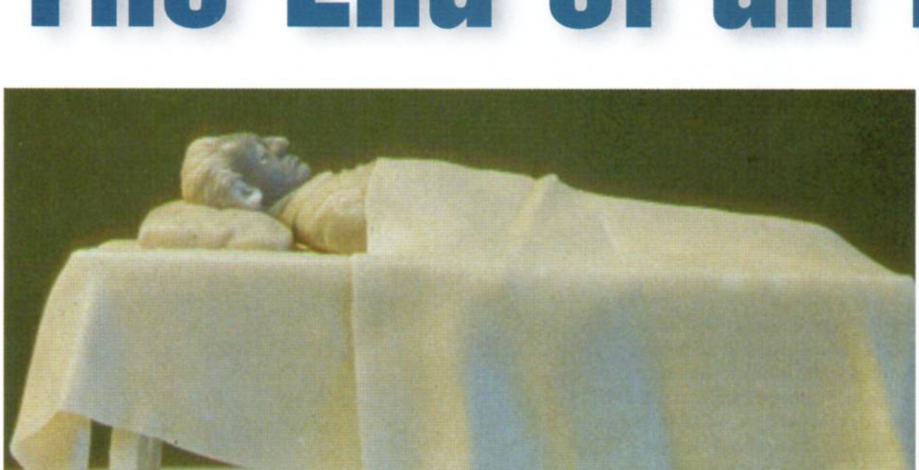




INSET LEFT: Swedish artist C.G. Cederstrom's painting of the scene in the cabin where King Charles XII lay dead was the inspiration for this project.

BELOW: The miniature of the dead king before painting.

The End of all Dreams

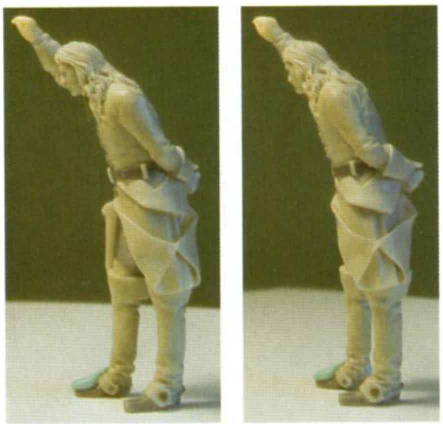


Mike Blank's first boxed diorama - the death of King Charles XII of Sweden

In my opinion boxed dioramas are the ultimate form of modelling and some of the best examples are quite simply works of art - and a lot of hard work too! Examples that come to mind are the great works of Shep Paine, Dennis Levy and Nick Infield.

The fantastic thing about boxed dioramas is that not only can you control and direct the light in a scene, you can also direct the viewer to what is the focal point in a scene. For some years I have been playing around with the idea of doing a boxed diorama, I just needed the 'right' scene to do ...and some courage to start the project!

After some searching and thinking, I finally discovered a painting by the Swedish artist Cederstrom, who was a prolific, turn of the



The figure that stands at the window on the left side of the diorama.

The figure that sits on the front of the bed. Note his 'body language' - a sad and tired pose.

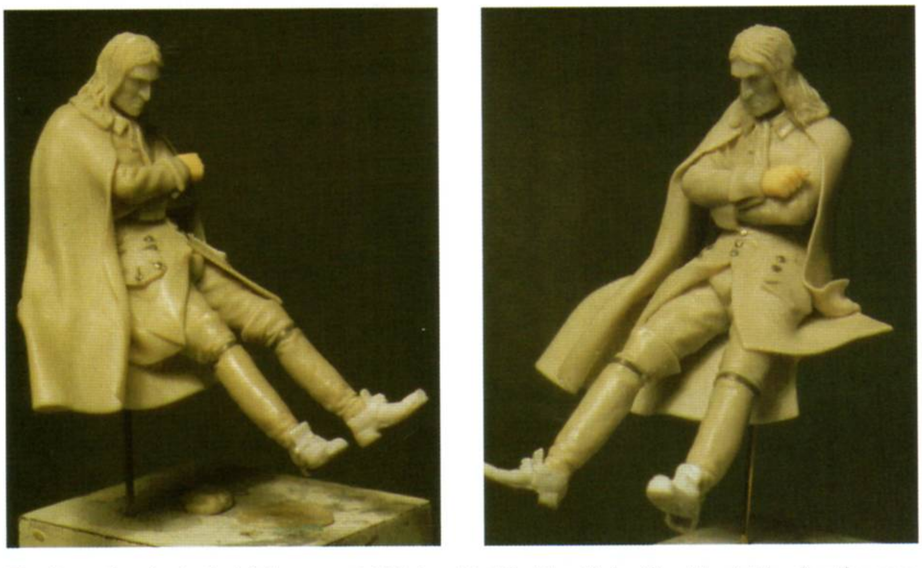
The right arm of the figure lying on the bed on the right side of the diorama is too long, but this won't show in the finished box.

century painter, specializing in subjects from the army of Charles XII. His paintings, full of nationalism and heroism are perhaps, not 100% accurate, but a lot of them capture the feel of the period with great compositions and drama. One of his best paintings depicts a scene the day after King Charles XII was killed by a fluke enemy shot during the siege of Fredriksten in Norway, on 11th December, 1718. His dead body was placed in the back room of a small cabin situated on the border of Norway and Sweden, and in the foreground of the Cederstrom painting we can see some of Charles' veteran Karoliner soldiers, sorrowful and broken down - their legendary king is dead. All hopes are gone and it is, indeed, 'the end of all dreams'.

I felt right away that this scene, so full of drama and emotion, would be perfect as a boxed diorama and being an indoor scene was ideal. Another aspect I really liked was that it was a very quiet and moody scene where only one figure out of nice is actually 'moving' whereas the others are frozen in their poses. Talk about a dramatic composition. After some pre-planning (doing sketches and head-scratching!) I started what was to be my most ambitious project and along the way I certainly learned a lot about doing boxed dioramas mainly by trial and error, blood and sweat, hard work and even some fun.

My first step was to sculpt all the figures in the scene. They were all done in my usual way using Magic Sculp epoxy putty over animated 'naked' figures formed over wire armatures. One thing I noted very quickly was that you only need to sculpt (and detail) what is visible to the viewer. This meant that all the figures were sculpted with the correct volume, but I only needed to detail what could be seen when they were in their final positions in the diorama. This really helped to speed up the figure design process and all the figures were sculpted in about three weeks of modelling time.

The seated figure with his hands and head resting on his sword hilt.

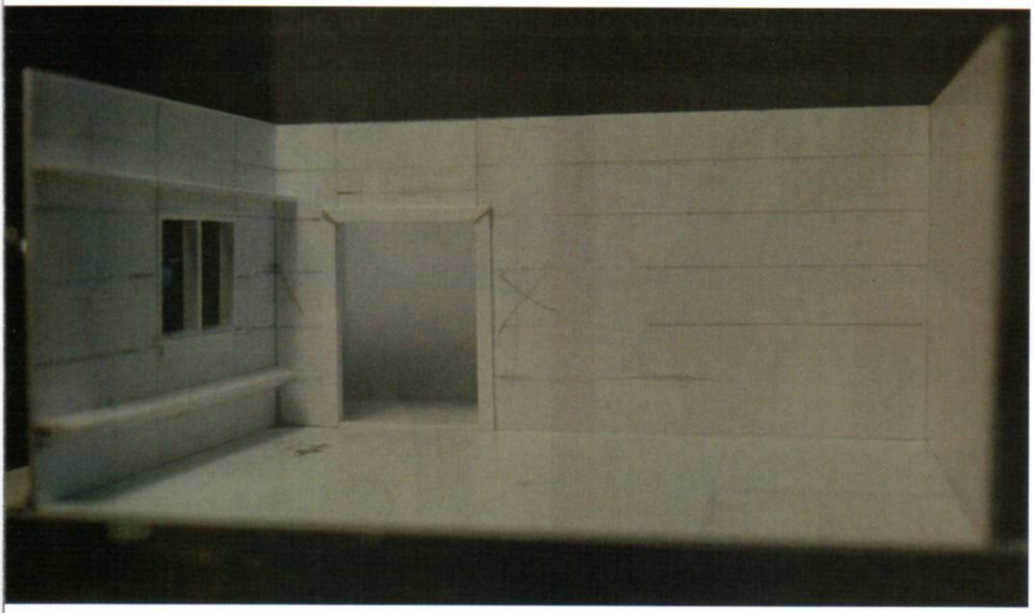


The figure that sits in the left foreground. Note how his left side, which will not be visible when the room is fitted inside the box, has not been detailed - cheating indeed!

Next, I turned to the actual cabin interior. For its construction I chose plastic card as it is very easy to cut and finish. The wood grain and the other surface textures found in the cabin were painted on rather than modelled in relief. The outer box with sufficient space inside for lighting was made for me by my friend (and excellent modeller) Janne Nilsson.

After all the sculpting and modelling was completed, I began painting the figures. As the scene in the painting shows a cold early morning light coming in from a small window I decided to paint the light effect on the figures. At first I was terrified about doing this as I have only painted figures with the light coming from above, but after some mental preparation I began and after the first figure I must confess that it wasn't as difficult as I had originally feared. Sometimes the fear is only in the mind.

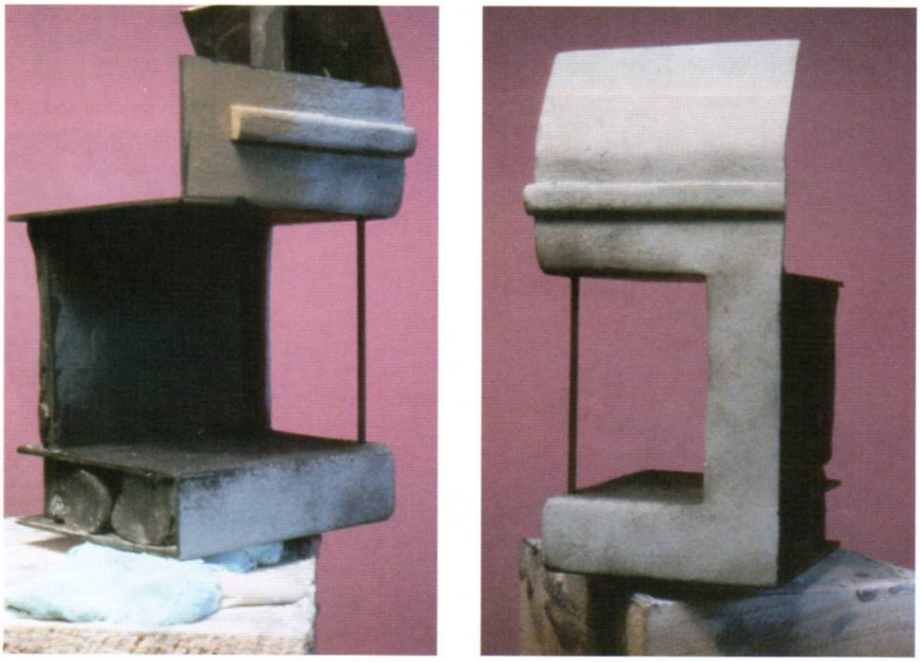
I used the same directed light when I painted the inside of the cabin. I firmly believe it is very



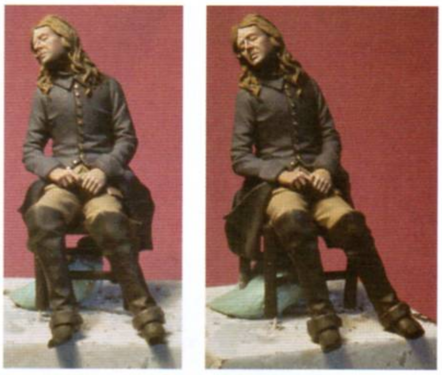
A shell of the room forming the interior of the box diorama was built up from plastic card.

Plastic card was also used to make up the low ceiling for the room.

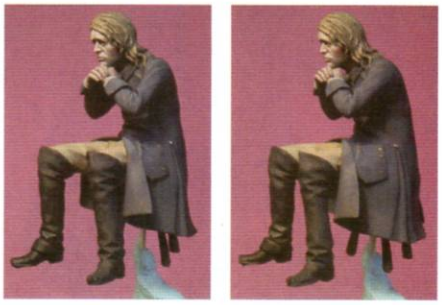
A bed positioned to the right of the room and also made up from plastic card was painted to represent a painted, yet faded, piece of wooden furniture.



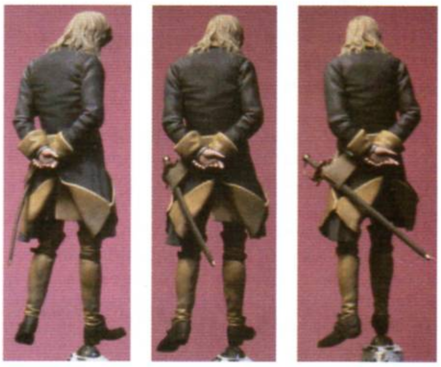
The fireplace was made from plastic card, then painted and heavily weathered.



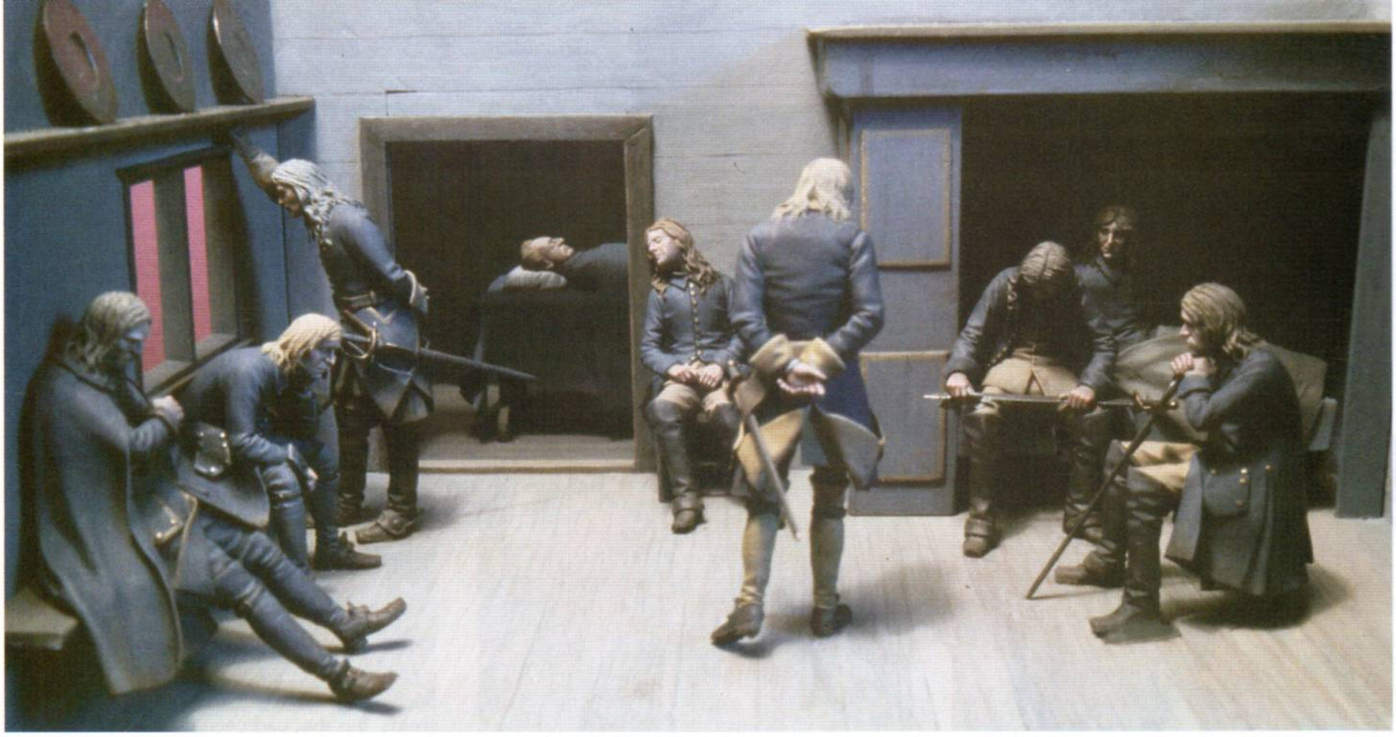
Painting is nearly complete on the seated figure who leans against the wall near the doorway leading to the chamber where the body of the dead king lies.



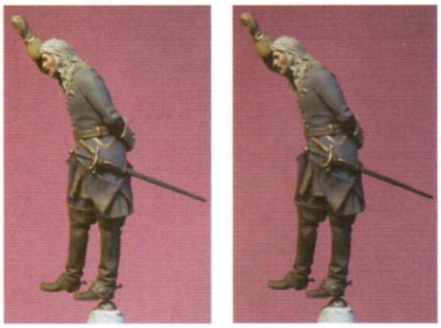
Painting is virtually complete for the seated figure resting his hands and head on his sword hilt.



Head bowed and hands behind his back, this figure was posed walking slowly, away from the viewer towards the door. Painting is complete on this figure and although positioned centre stage, only his back will be visible.



Everything in place and the interior for the box diorama is complete. The ceiling section which forms the top of the room has been removed here to enable these photographs to be taken, the interiors of box dioramas being notoriously difficult to photograph.



Note how the light grey colour of the wig of the figure leaning against the wall near the window helps direct the light coming in from the window, which also adds individuality.

Printer's inks were used on the sword's blade and hilt of the figure who sits on the front of the bed on the right of the diorama.

important to be consistent when painting a scene full of figures. Throughout the painting process I used my trusty Humbrol enamels, acrylics (Vallejo and Andrea), oil paints and printer's ink. I have said it before and I will say it again. There is no need to be an exclusive Humbrol or exclusive acrylic painter. Use whatever it takes to achieve the results you've planned for. I personally don't believe that there is one type of paint that is perfect for every aspect of miniature figures and to put it simply - there are no 'right' tools putties or paints.

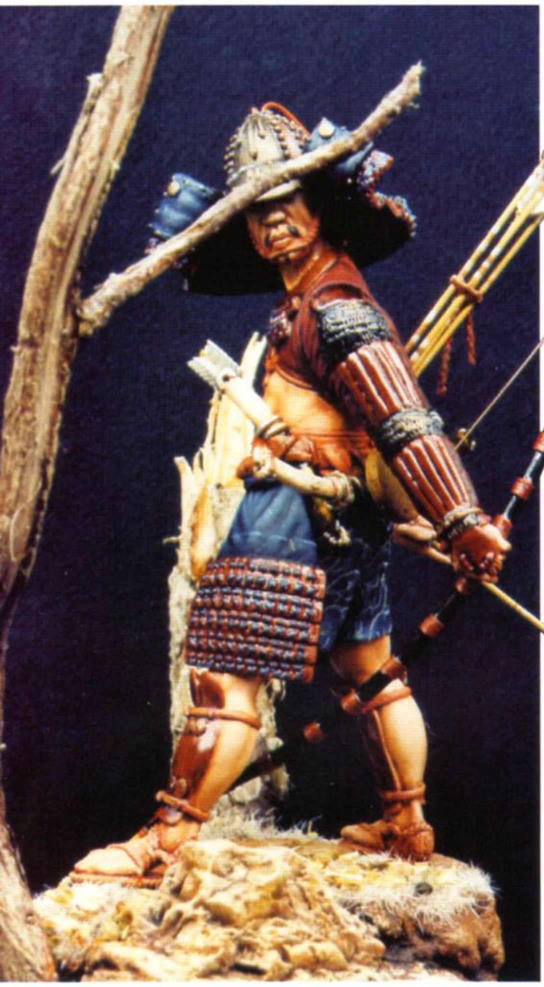
The final stage in this project was the lighting, indeed it is one of the most important parts of a boxed diorama and also it was to be the most problematic part of this project. I certainly needed the extra time I'd saved on sculpting and painting the figures to sort out the lighting.

I knew what I wanted to achieve, but since I know absolutely nothing about electrics and wiring I once again called on my friend Janne Nilsson for help and after a lot of trial and error I finally got something I was reasonably happy with. Being a very small cabin I was faced with a problem; the corner to the right in the scene (where the bed is) was very dark as the weak morning light would not reach this area to illuminate it.

After some thinking and repositioning I was faced with two solutions. To have a well-lit scene which would lose a lot of the dramatic impact, or to have a darker, but more moody, yet dramatic scene. I chose the latter and by doing this darker version I also maintained the focus on the figure of the dead king lying in the back room.

As I've mentioned, this is the most difficult project I have every done, by far. I learned a lot throughout the modelling and planning stages and also a little about electrics.! I also experienced plenty of mistakes along the way and learned a bit more about 'trial and error'. Would I do it again? You bet! But later perhaps - not tomorrow! Certainly doing open vignettes and dioramas seems like a piece of cake nowadays. ■

The Hunter



White Models' 90mm 'Half Armoured' Samurai Archer gets the Adrian Hopwood treatment

Although I did touch quite heavily on the Samurai Bow and arrows, both how they were made, and also how they were used, in the article I did covering the Andrea Mounted Samurai last year, I will add a few items here that you might find of interest.

Most of the time, when shooting a bow, a Samurai would wear a glove on the hand that draws the string. This might be either just a glove to cover the thumb and two of the fingers, or sometimes a full glove would be used. If the full glove was being worn, then quite often the thumb, index finger and middle finger would be of a differently coloured/patterned material. Whilst the arrows were usually a disposable, easily broken asset, a lot of care and art went into their production. They could sometimes be cut from bamboo so that the nodes (the dark bands on the stave) would match when stacked in a quiver, but also different feathers were used, eagle, crane, pheasant and hawk being common. Also, the very best arrows might have a gold lacquer (or other decoration) in the small area of the shaft between the fletchings.

Japanese arrowheads were generally made with a tang that slotted into the bamboo cane, and reinforced with some rattan fibre bindings and unlike Europeans arrows, they were probably picked up close to the head, rather than near the nock, and the arrow placed onto the left hand on the thumb side of the bow, sliding the right hand back down the arrow shaft to nock it and then draw. I'm not 100 percent certain of course, but I can't find any references to arrows being placed head first in the ground in front of the archer for ease of picking, so I suppose that rate of fire, just like the draw strength of the Samurai bow would be less than that of a comparable European weapon of a similar period.

The model is shown with a very broad-headed arrow which, it is thought, was to maximize damage to anything 'fleshy' that it hit, and although used offensively for war, would tend to be more effective against unarmoured subjects, for instance when hunting. The small tabs on the bowstring at the tips are to mark which end of the bow cord is top/bottom, and also a second tab was sometimes used at the upper end so that the cord could be gripped in the archer's teeth and his hands left free to bend the bow whilst stringing it.

Half-armoured
Samurai
Archer

The Figure Kit

I'd actually started this white metal figure kit over three years ago, in a rare moment of self-indulgence (well, I didn't have much on the bench at that time) and there was soon an avalanche of review items and commissions that displaced it. So back in its little box it went. Having completed the Andrea Mounted Samurai Archer recently, I took it upon myself to have a second look at this, and see if I couldn't actually get him finished.

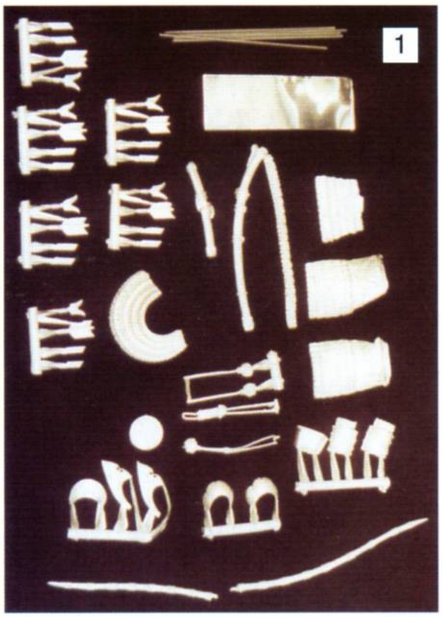
I'd managed to get the larger body parts joined together, and added paint to all the flesh areas, and the basic blue colour on the shorts, but that had been the sum total of my efforts. But before I go there, I should really tell you a bit more about the kit, which is a relatively complex kit, and I suggest that you'd be better prepared if you had assembled and painted a few white metal kits prior to attempting this one. This is not to say that there are any problems, just lots of bits, and there's certainly an easy way of doing it. Of course, there must be half a dozen hard ways of doing it too. **Photo 1**, which is a rather old photograph, and I apologize for its poor quality, shows the kit parts all laid out.

The split of parts is logical, with breaks at natural points, so painting in subassemblies is easy. The metal is nice to work with, being quite soft, and there is an instruction sheet to help show how to produce some of the smaller and fiddly subassemblies from the several parts provided. One of the subassemblies can be seen in **Photo 2,** which shows how I've pinned through one of the legs at an angle and up into the upper body. This hole will be filled in and also covered by an armour plate as the painting and assembly of the kit continues. It's worth having several dry runs with the parts, using Blu-Tack helped with this, making sure that parts stayed together temporarily to test what would get in the way when painting.

I decided that the main body could be joined together, and that the arms would be left separate. This does create a problem with the cloth covering on the left shoulder, but any slight differences in colour can be disguised with a seam line painted on to break up the separate pieces of cloth. I also decided to keep all the small details off the figure whilst the paint was applied, adding these as though dressing the figure with them after all the painting had been finished.

Let Painting Begin

To begin the painting, I added a thinned coat of acrylic white (Skull White from Games Workshop, thinned with Isopropyl Alcohol). The thinner used here allows the paint to get a better grip on the white metal, and prevents the 'beading' effect that is sometimes seen if water is used. I then added three more thin coats of the same colour, diluting the paint for these with boiled water. Boiling the water gets rid of some of the impurities, especially things like Chlorine. Adding a couple of drops of washing up liquid to a jar of water and using this as a reservoir to thin the paint will allow it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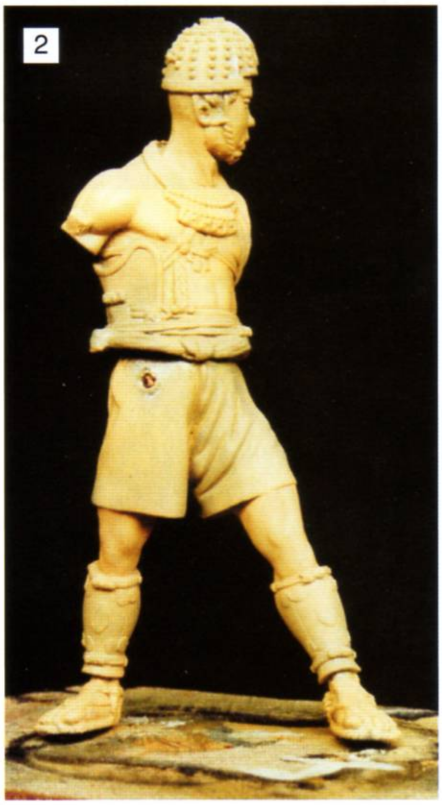
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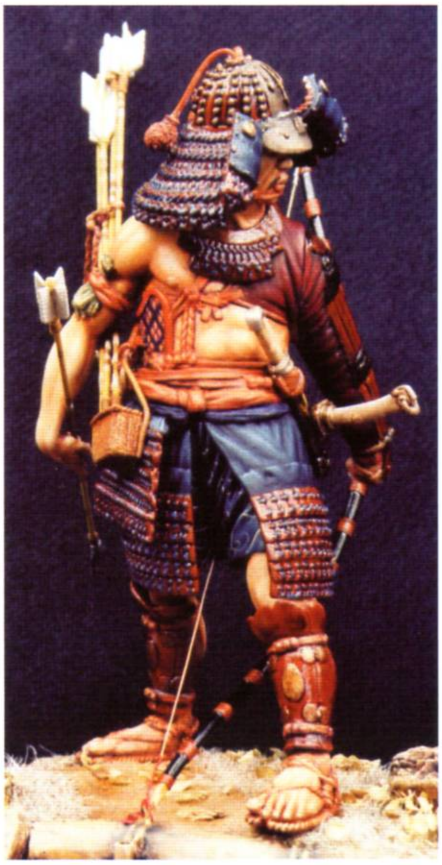
to flow just a little bit better too.

Over these initial coats I then began adding the undercoats, firstly to the skin areas, these being a mix of Humbrol Flesh acrylic 61, Skull White and Orc Brown (both the latter being from Games Workshop). Once this was dry, I could begin with oil colours.

I mixed up a basic flesh tone, which was keyed to match the acrylic colours previously applied. This was made by mixing Winsor & Newton Flesh tint (which is very pink in appearance), some Mars Yellow, and a little Titanium White. The ratio was approximately 4:1:1 of these colours respectively. I also mixed up a small amount of a shadow colour, using equal amounts of Mars Brown and Mars Yellow.

I applied the light flesh coloured paint to the model, stippling this to even up the coverage, and mostly remove the paint. Then I added some of the darker shadow colour to the recessed details, and for highlights some of the Titanium White was used. By adding the paint to the model with a good quality sable brush, the colour was placed accurately on the part of the model where it was required. Using an older, cut down brush to stipple the area lightly, allowed the colours to be mixed together on the model. So that there isn't too much build-up of paint on the model, or the brush for that matter, it's best to use an old piece of cloth, or a piece of kitchen paper towel to wipe excess paint from the bristles of the brush. I use this method whenever I paint with oils, and simply adjust the size of brushes (either bigger or smaller) dependant upon the area being painted.

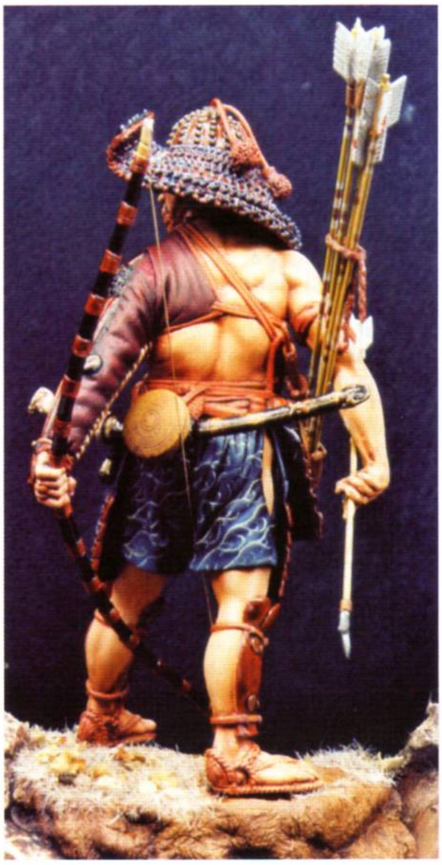


For the shorts, I used Games Workshop's Moody Blue as an undercoat, and over this added Prussian Blue oil colour. To build up the mid-tones and highlights, I simply added small amounts of Titanium White onto the model in the required areas, and then blended this into the blue; obviously, the more of the white that I added, the lighter the blue became.

As a contrast to the blue and to brighten up the model, I decided to do the other details in orange, or sandy yellow shades. Belts and cords were painted in various shades of orange, using Games Workshop's acrylics for this. I used a lot of their Flame Orange, and some of the dark reddish-brown (which I don't know the name of, because the label on the jar I have has disappeared!) Highlights came from a mix of the Flame Orange and Skull White.

The Rusted Look

In Fraser Gray's photos of Samurai (Some of which were used in the Andrea kit article) and some in the Mitsuo Kure book on Samurai costume, there are several chaps who have a rusty coloration to their armour. I hadn't attempted this effect before, and decided to see if I could mimic it in miniature on this model. I kept the pieces of armour separate from the main assembly here (although there are some pieces moulded directly onto the main casting - these were painted along with the separate parts which allowed me to paint the backs of the separate pieces black, and also to work on the armour, then switch back to the figure whilst the armour was drying.



For the basic colour of the armour I used Games Workshop's Vermin Fur and added some highlights with a 1:1 mix of this colour and Orc Brown. Over the top of that, once dry, I added several thin coats of Tamiya Clear lacquer X22, mixing a spot of blue to the orange clear colour to give a dark rust colour.

Once the rust colour had dried fully, I added some blue acrylic (Moody Blue plus some Chaos Black) to the cords holding the lamella plates together. I gave these three coats to build up some density to the colour, and then added more of the blue and a little bit of Skull White to the mix to make a mid-tone. This was applied to the cords, allowing some of the darker colour to show around the edges and at the bottom of each cord. Finally, some more white was added to the blue mix, and this light colour was applied to the tops of each cord to form the highlights.

As each colour was added in several coats, allowing the depth of colour to build up, there are probably 10 or 12 coats on each of those tiny bits of detail. It's tedious work, and one of the reasons that I don't do a lot of Samurai subjects, but worth it for the effect.

Whilst this fully dried, I painted in the pattern on the shorts. I mixed up a very pale sand colour (Mars Yellow and Titanium White oils), and used this to sketch in the basic pattern of diagonal lines with periodic curled decorations. By adding gradually to the complexity of the design and working gradually around the model, a simple initial sketch of diagonal lines was built up into something much more complex. It is a pity that this isn't seen too much on the finished figure, as for once I actually managed to keep the decoration on this area fairly even as it passes around the figure. The cloth areas at the top of the armoured areas were painted to match the blue of the shorts, but I felt that as this is only a fairly lowly foot soldier, then he wouldn't yet be likely to have had the money to get decoration added to all his kit.

The armour was glued in place, having previously painted the rear faces of it with some Chaos Black acrylic. I also checked that I'd painted all the straps and belts at this point, adding the sandals in too, and using the orange paint on the sash that is moulded around the two swords. This turned out to be rather pointless, as I needed a small amount of filler, and had to re-make the colour to paint over these areas when joining the swords to the model.

The scabbards were painted whilst separate from the model, adding a couple of coats of the Chaos Black acrylic, and then floating on thinned Testor's Gold enamel. I did stipple some more of the paint in a couple of places on each scabbard, to intensify the gold colour, and once dry, this was then coated with several thin layers of the orange/blue mix of Tamiya clear colours.

The hilts of both swords were kept relatively simple. I painted each one with an off-white colour, and then added some pure white to pick out the highlights. Finally gold was employed to add the metal fittings, adding some Olive Green oil paint to this to form the shadows.

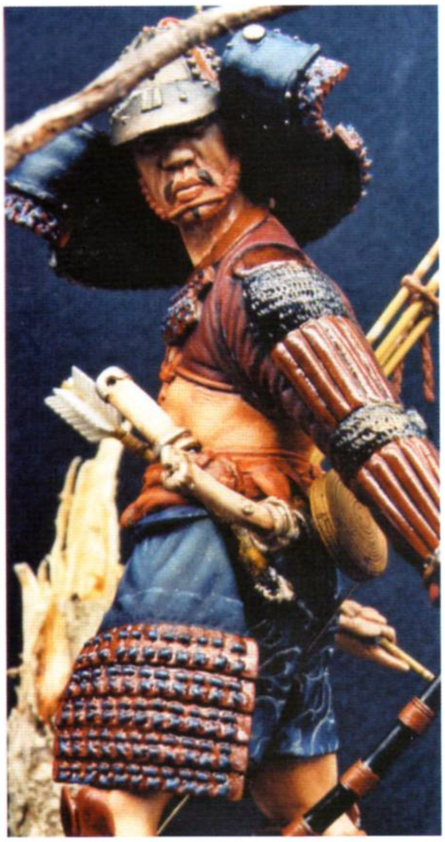
Arrows

The arrows came next. These are a clever idea in theory, but difficult to do in practice. In the kit there are several pieces of thin wire, several arrowheads, and several fletchings to form the flights. The fletching is supplied as one pair cast flat to form the opposing sides, and then two more separate fletchings to make the flights into a credible rendition of the four-flighted arrow. (I've haven't explained that very well, have I?)

Basically, each arrow is formed from six parts, and you've got several to build. I've seen most models sporting three arrows in the quiver, and a fourth one being held by the figure. I went for an extra one, because either I like torturing myself, or am an idiot with too much time on my hands. I did cheat by making only the arrow being held by the figure complete with its head, whereas the ones in the quiver ended up being just the ends of the wire slotted into the box-like cup that holds them upright.

I painted the arrows separately, then slotted them in place and added the wire fastener around their mid-point. This, in itself, is quite testing simply because the arrows' components fall apart for the fun of it, and holding them in one place, getting the wire around them, not damaging the paint, and staying moderately sane is just about possible.

The form that a Samurai bow generally takes is quite well-documented - that is, a larger upper section compared to the shorter lower section, in order to increase the draw



strength and because of the diminutive height of Japanese people. I notice when I look at assembled and painted examples of this model that he's actually holding his bow in such a way, that if he wanted to fire it quickly when either expecting an enemy or some food then it's upside down! Yes, try holding a bow (if you've got one to hand, otherwise a stick will do) like the figure is doing, and to fire it you'll be twisting your wrist through 180° as you bring the bow to bear. Hence the longer section of the bow is pointing towards the ground. This makes for fun, as with the positioning of the model, the top end of the bow stave is now more than grounded, it's about six scale inches below ground! This is why I decided to make the groundwork he's standing on as a stepped formation, as a flat base simply wouldn't do.

Stepped Base

Once the model was fully assembled, I began work on the base. I used a small octagonal plinth, and to this added some moderately large lumps of rock to help build up the height. I used Milliput as both the glue for this, and also as the 'soil' surface, texturing it with a toothbrush on the edges, and an old plastic bristled hobby brush for the horizontal surface groundwork.

I couldn't find any cane that could be pressed into use for the bamboo steps, simply because the leaf nodes that give bamboo its characteristic form and colour were too far apart on the cane that I had in my shed to look realistic and in scale with the model. I made use of some small twigs from the garden, from a cherry tree for those who must know, and painted it to look like bamboo.

The formation of the base can be seen in **Photo 3;** there's two broken twigs being pressed into service as trees, and the basic texture of the Milliput can be seen. The small pieces of cane used to hold the steps in place are cocktail sticks, having been cut off square, and then drilled out to give each one a hollow end. I'd forgotten to do this with the larger twigs, as can be seen in this photo, and so I did it prior to painting.

Photo 4 shows the base after painting with earth colours - Games Workshop's Orc Brown acrylic with Burnt Umber oil colour over the top, the latter being wiped off to reveal the texture of the Milliput. Also, the Bamboo was painted with Burnt Umber, Mars Yellow and Titanium White oils, leaving the paint streaky so that the texture of the bamboo is hinted at. Mars Black was used to paint in the leaf nodes.

After this photo was taken, static grass was added sparsely to the upper surfaces of the groundwork, holding this in place with some wood glue. Once the glue was dry, the static grass was painted with Humbrol enamels. The trees were painted with oils too, mainly to increase the depth of shadow and highlight. I used a wash of Burnt Umber to begin with, and then added Olive Green, Mars Brown and Titanium White to them, dry-brushing these colours on, and trying to work the different colours into separate areas of the tree trunks.

The model was super-glued into position, having made holes for the wires in the Milliput and imprints for his sandals whilst the putty was still soft.

Final words

Well, as usual, I'd say that I enjoyed making this kit. It definitely isn't one for beginners, as it can be quite fiddly to put together and you definitely need to be thinking about what goes where, and why. On the other hand, there is an instruction sheet, where the sculptor has given line sketches for how to put things together. There's also a couple of additional photos included which, when added to the box top shot, should give a fairly good indication of where things go.

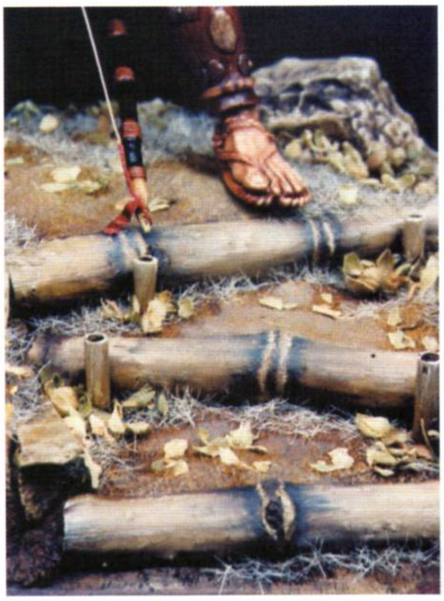
It is only a relatively small figure; but it's one that when finished, will draw the eye. I've kept the paint job fairly simple and restrained, as mentioned; my chap's relatively poor and has had to scavenge the battlefield for some of his kit. But obviously the open areas of clothing and armour will allow a vast canvas for the artistically minded to vent their skill upon.

I'm not sure how readily available this kit is, and I'd suggest that the first stop should probably be either Historex Agents in the UK and possibly The Red Lancer for those over in the States. White Models kits have never been cheap, but with a neat paint job, he'll look very good in any collection. This kit WM903 is £40.75 plus £2 postage from Historex Agents, Wellington House, 157 Snargate Street, Dover, Kent CT17 9BZ. Tel: 01304 206720. Fax: 01304 204528.
sales@historex-agents.co.uk
www.historexagents.com

References

Photos of Samurai re-enactors taken in London by Fraser Gray.
Arms and Armour of the Samurai Warrior - I. Bottomley & A. P. Hopson.
Samurai, Mitsuo Kure.

Just a mention about something related (vaguely) to this piece. He and a whole lot more of my models are now on my new Website, kindly put together by Robin Snelson. The address is:
http://www.adrianhopwood.co.uk ■



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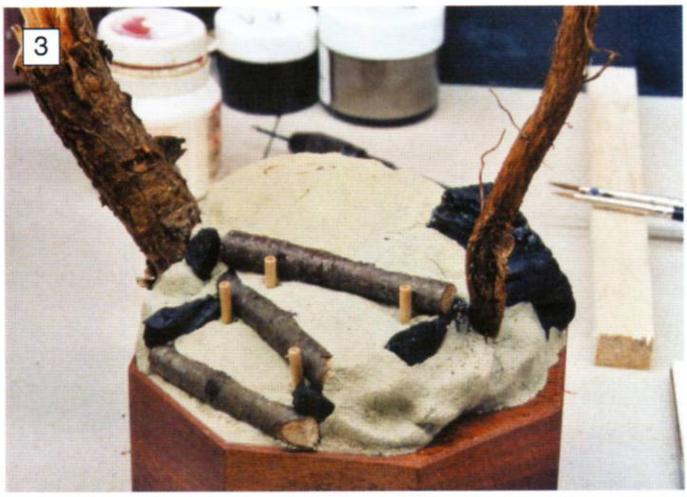

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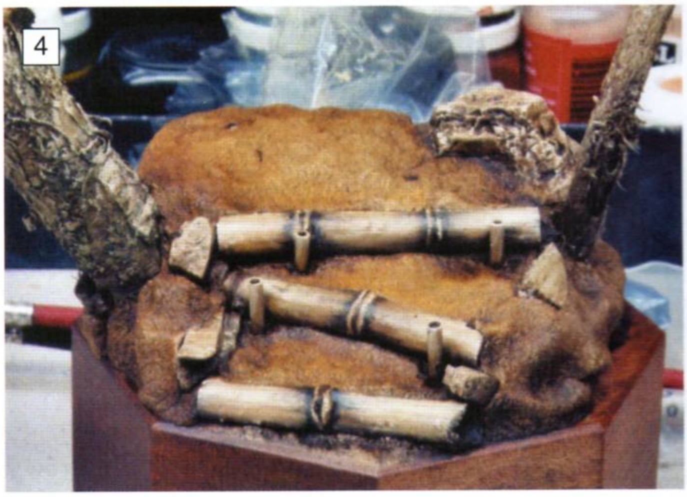
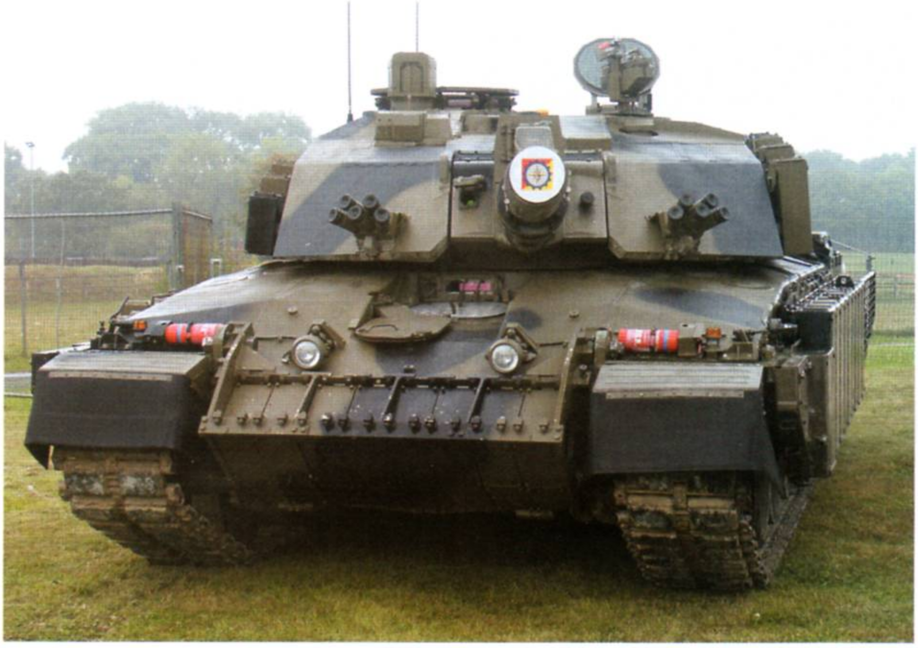


A look at the add-on armour that has been fitted to Britain's Main Battle Tank to defeat shaped charge warheads. Commentary by Peter Brown



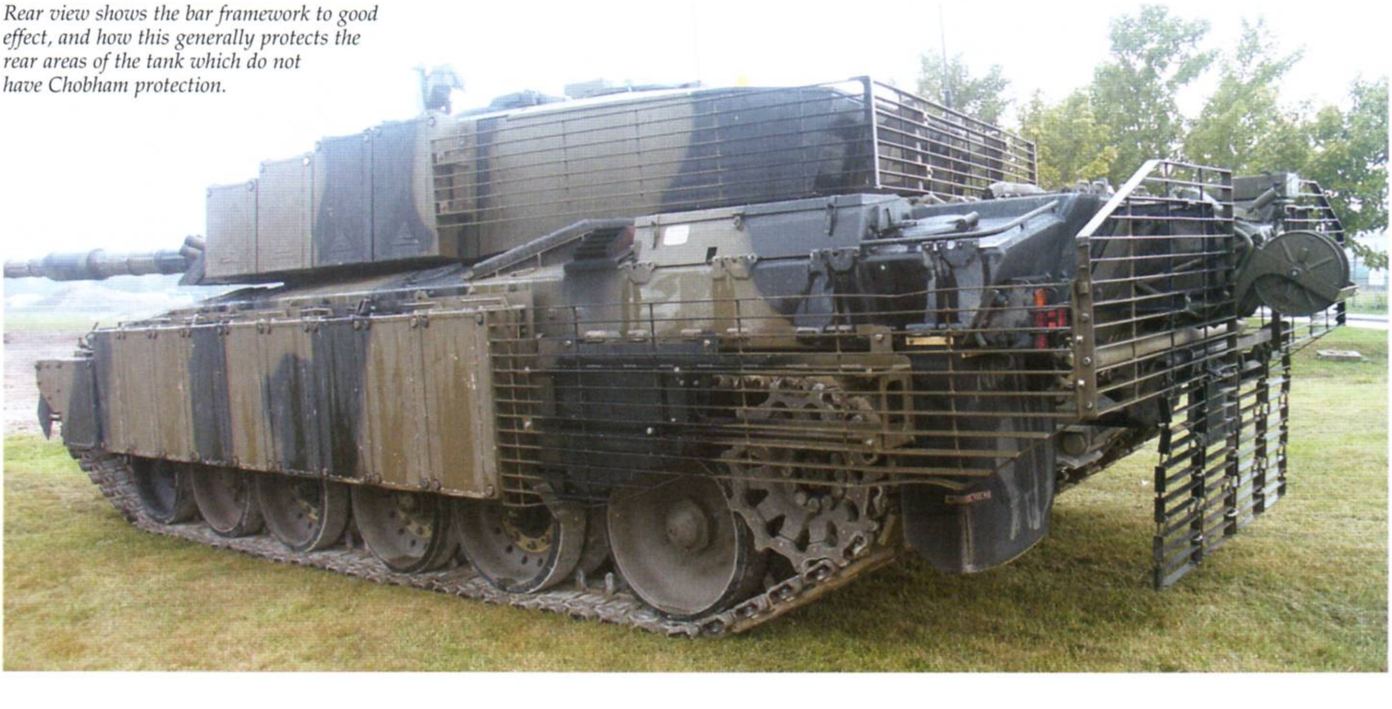
Walk Around a 'Bar Armoured' Challenger 2

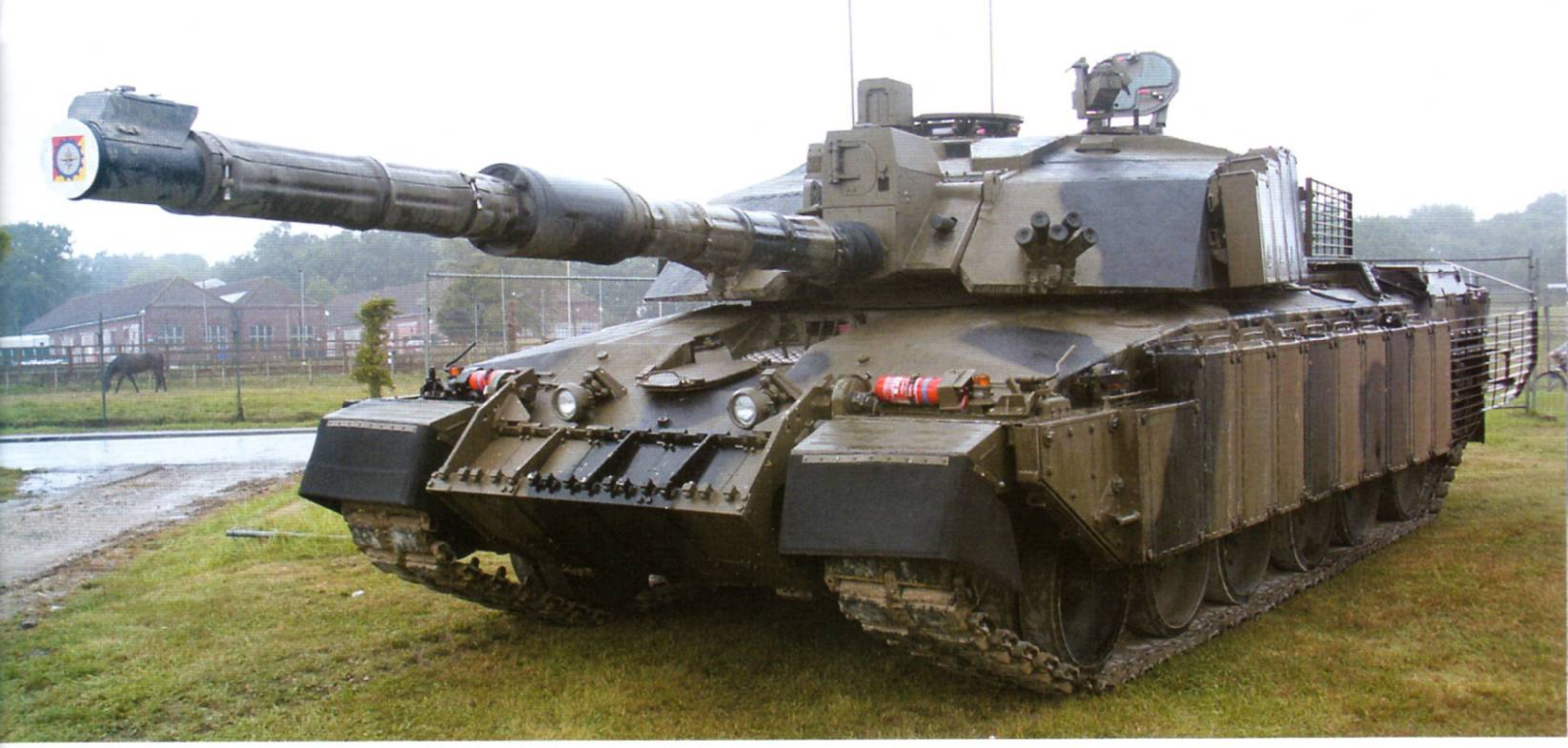
While the C2 in common with all modern tanks is well protected against most antitank weapons, it was designed for tank against tank fighting with the greatest protection arranged around the front of the vehicle, concentrated on the turret with less emphasis on the sides and rear. Where the threat comes from close in, against hollow-charge weapons such as the widely used RPG or similar shoulder-launched rockets or from antitank missiles such as MILAN, TOW or the various Russian systems, additional protection is needed.

These systems all use the same type of warhead. Unlike a conventional shell which explodes in all directions, the hollow charge is shaped, to form a jet of very hot gas moving very fast. This is usually augmented by lining the front face of the charge with copper which melts and the molten metal helps give the jet more substance. The jet is able to burn and punch its way through steel armour, with penetration claimed which is far greater than the thickest armour that would be possible on a tank.

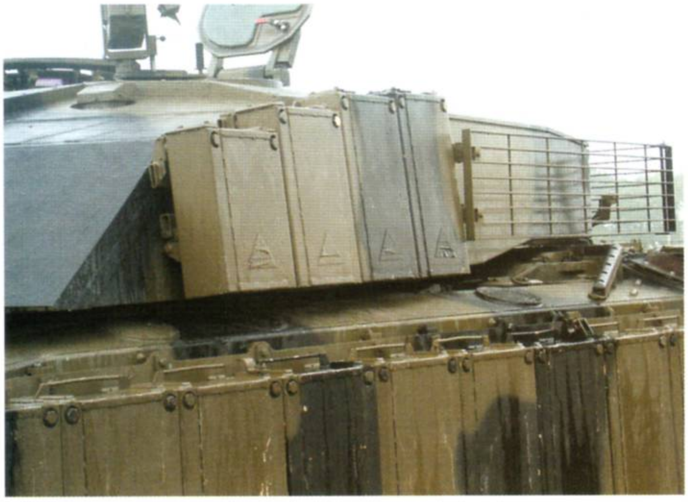
While current generation Chobham-type armour with its mix of components offers excellent protection against APDS rounds and hollow charge weapons, it is both bulky and heavy. To completely protect a modern Main Battle Tank using it would result in a great increase in weight which would seriously affect mobility. Explosive reactive armour such as the systems pioneered by the Israelis and adopted by the former Soviet Union for their tanks is also effective. This works by using the hot jet of the hollow charge to set off an explosion in the block which forces the outer plate of the block into the path of the jet. More metal is fed into the path of the jet which reduces its effectiveness. While lighter than composite armour it is explosive and thus has its own hazards.

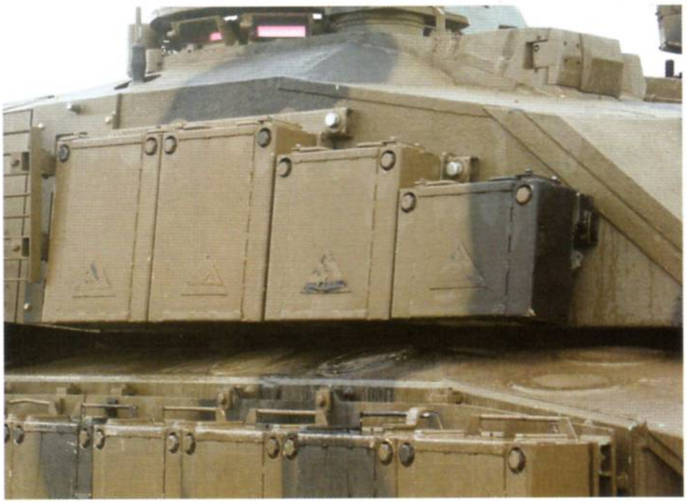
Rear view shows the bar framework to good effect, and how this generally protects the rear areas of the tank which do not have Chobham protection.





General three-quarter front view; from this angle the armour blocks on the turret side is the most noticeable difference from the standard uparmour kit.



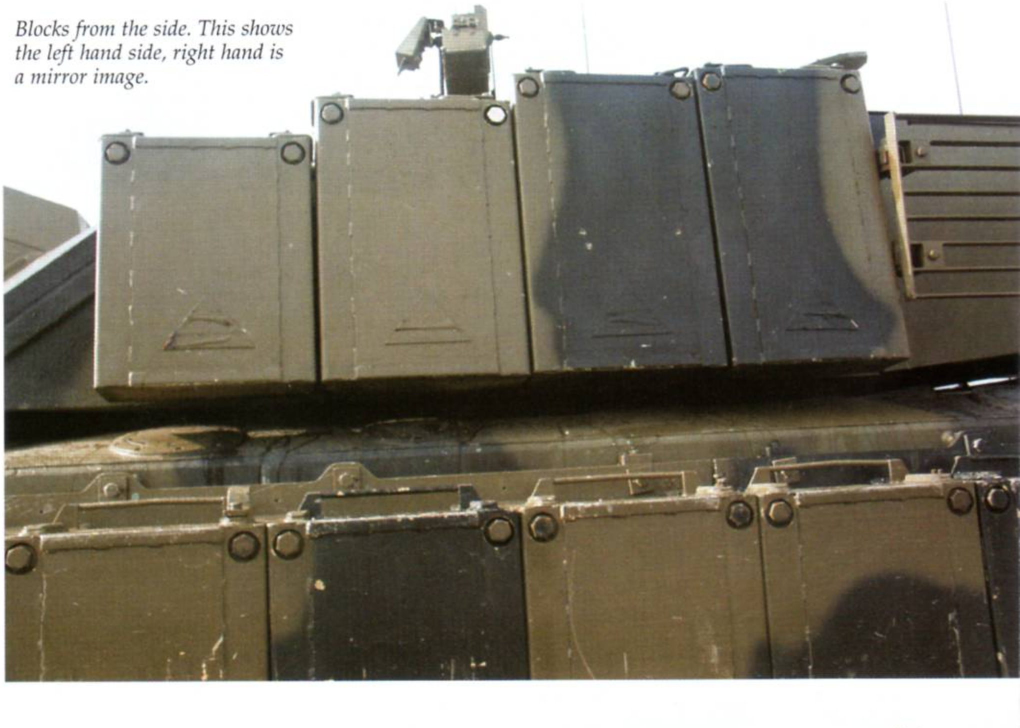


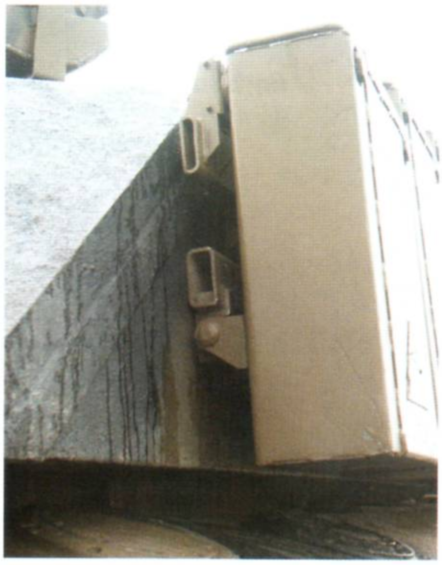
ABOVE LEFT: Closer view of the turret side blocks. The triangular plate fitted to the blocks may denote that these are not 'working' blocks, but are instead full-size dummies.
ABOVE RIGHT: Alternative view of turret side blocks. Note that these do no attach flat onto the turret face, but are mounted in a frame.

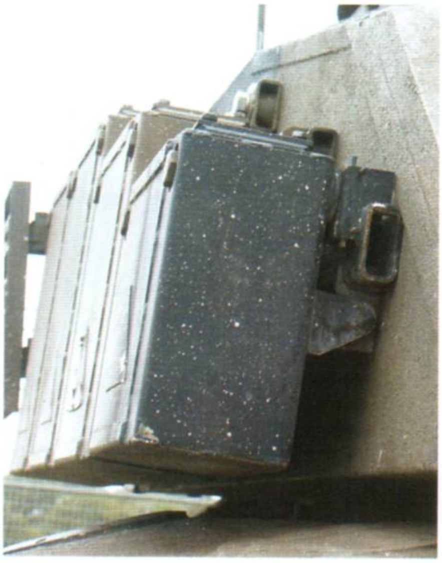
However, there is another way to defeat the hollow charge. As the jet has a maximum length, if the warhead can be made to explode at a greater distance from its target than the designers intended, some or all of its force is wasted. Placing a light barrier around the target sets off the warhead's fuse before it hits the main structure. The idea is not new, it could be seen on Russian tanks operating on the final battles for Berlin in 1945 and has been seen fitted to various vehicles and positions used in Northern Ireland as well as on Chinese Type 69 series tanks protecting the front arc of the turret. While there are detail differences the principle is the same and each type consists of a series of metal bars or slats forming a frame or cage.

To help protect vehicles used in close-quarter fighting in Iraq, several kits have been developed. These are available for CVR(T) recce vehicles such as Scimitar, Warrior armoured personnel carriers and the Challenger 2 main battle tanks. In the case of the CVR(T) this is an all-new package, for Warrior and Challenger it includes new items in addition to the extra side and front protection first fitted for the 1991 Gulf War and used in various peacekeeping missions since then.

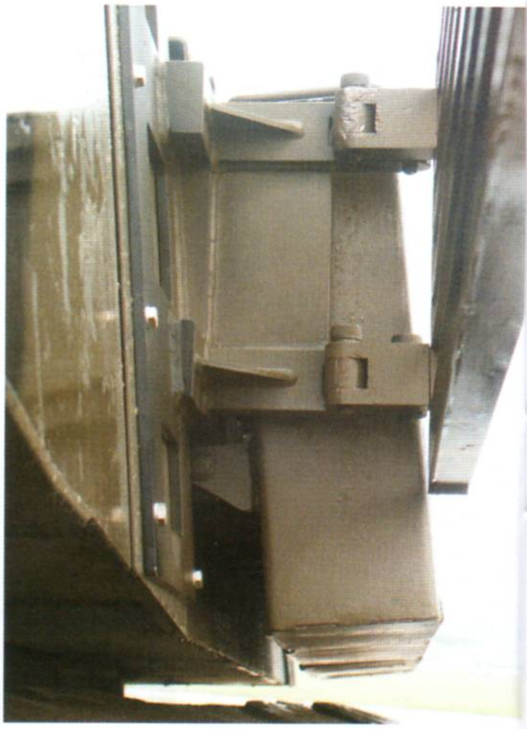
Blocks from the side. This shows the left hand side, right hand is a mirror image.



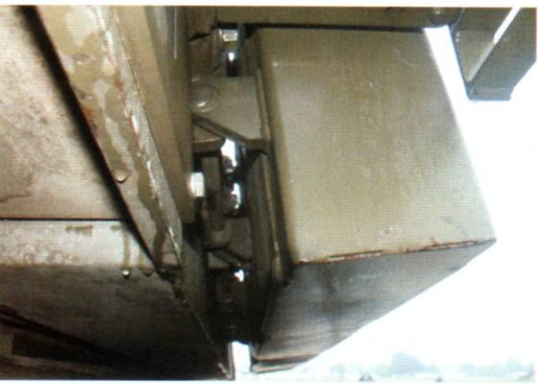




ABOVE LEFT: Fittings attaching the blocks to the turret. Note the gap between them and the turret side.
ABOVE RIGHT: Another view of the fittings attaching the blocks to the turret.



Block fitting from the rear, also a good view 'inside' the rear frame.



Looking up from below showing the attachment points.

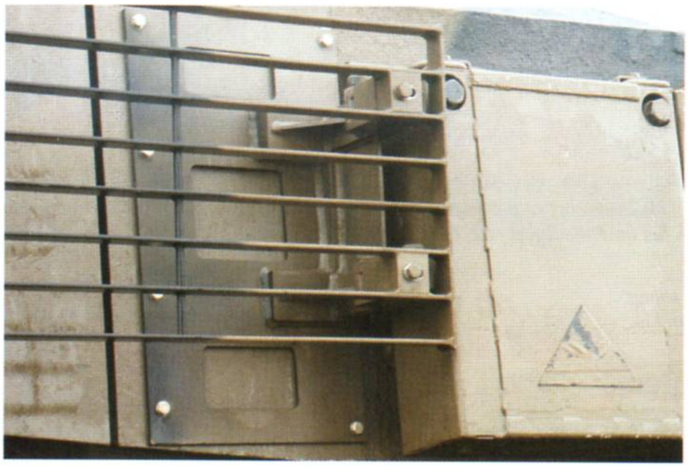
While these can be seen in newspaper and TV coverage, there is usually little chance to examine them in detail. However, when a C2 fitted with the add-on package appeared at the Tank Museum's 'Armour Through The Ages' event last September, it was an ideal opportunity - despite the inclement weather - to look it over and take photos.

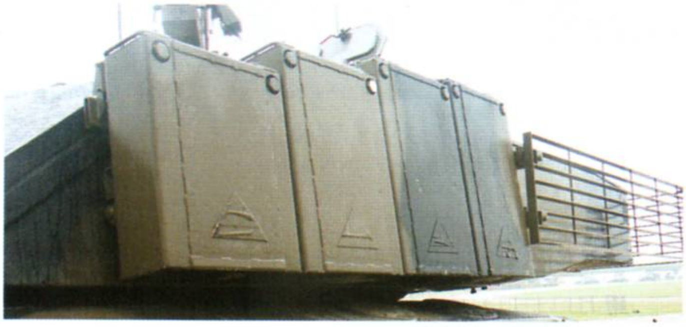
The photographs offer a walk-around of the vehicle and while most are self-explanatory, the captions will hopefully help clarify matters. While the photos are as much as possible in a logical order, some views may show two features in the same shot.

Updates for Challenger 2 kits

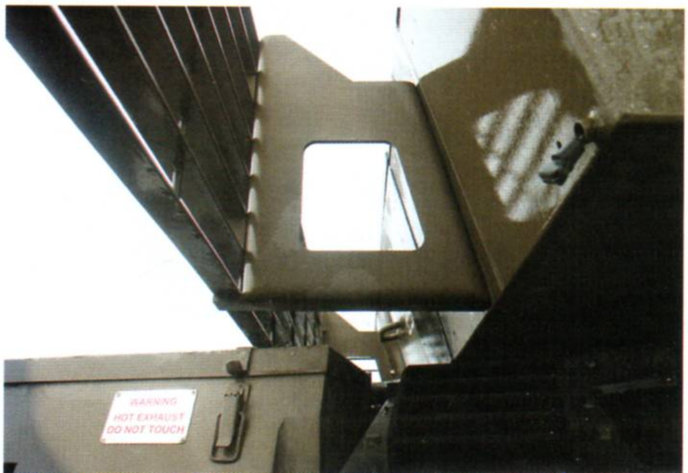
For modellers who would like to update their 1:35 scale Challenger model kits Accurate Armour produce photo-etched and resin kits of the latest armour fits for Challenger 2, price £59.98. ("Atten-shun!" ***Military Modelling*** Vol.35 No.15). References are: C086 Tamiya kit 35274 (Desertized); C086T Trumpeter *Op Telic;* C086A Accurate Armour kit *Op Telic.* Accurate Armour Ltd., Units 13-16 Kingston Industrial Estate, Port Glasgow, Inverclyde, Scotland PA14 5DG. Tel: 01475 743955. Fax: 01475 743746. www.accurate-armour.com ■

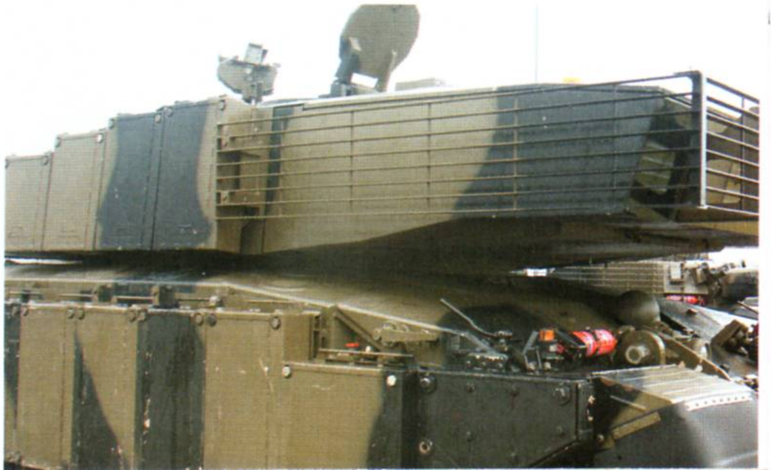
Next issue: 'Bar Armour' for the CVR(T) Scimitar



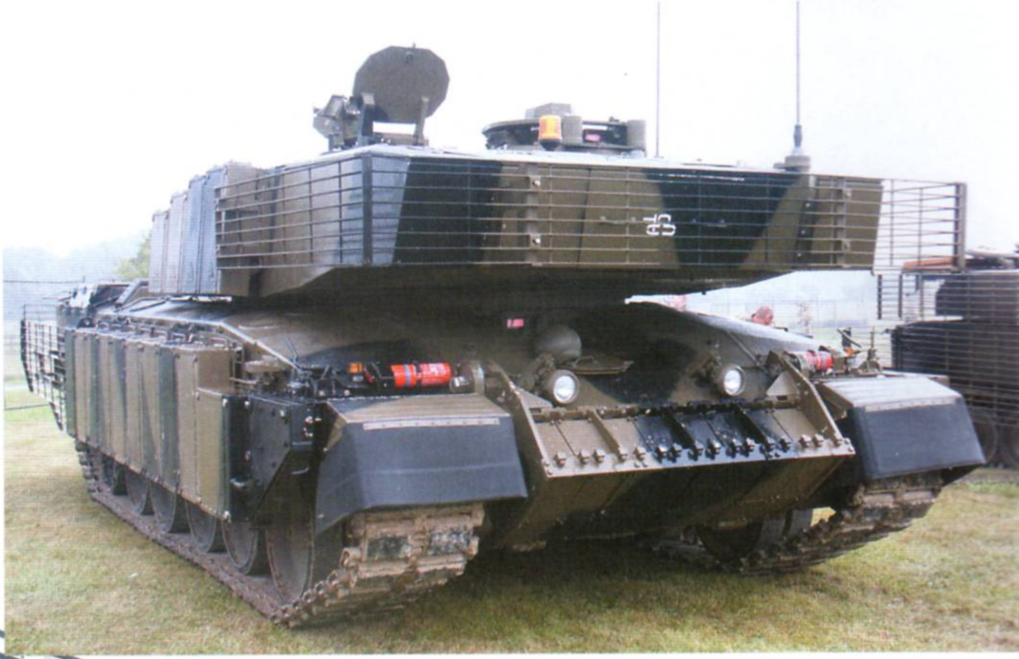


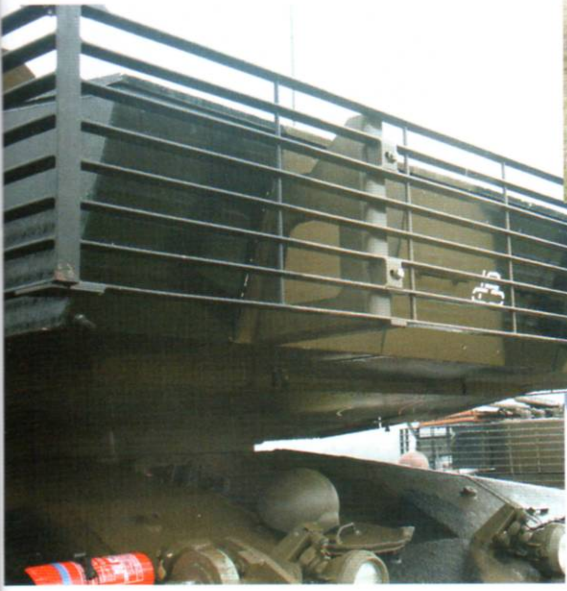
ABOVE LEFT: Immediately behind the side blocks is the new bar framework. This is made up from a series of flat strips welded together, from the side they could be mistaken for round bars. Note the large mounting frame bolted to the turret side. ABOVE RIGHT: Turret side frame seen from the front. The frame is vertical, hence the slight angle between it and the armour blocks. BELOW LEFT: In this view the turret is traversed to 3 o'clock and the photo was taken looking up. The mounting bracket can be clearly seen, as can the fact that there is no floor to the frame as would be seen if this was a stowage rack. BELOW RIGHT: With the turret facing backwards, the side section of the frame is positioned for a clear view. It is attached only at the front with the rear edge bolted to the turret rear section.



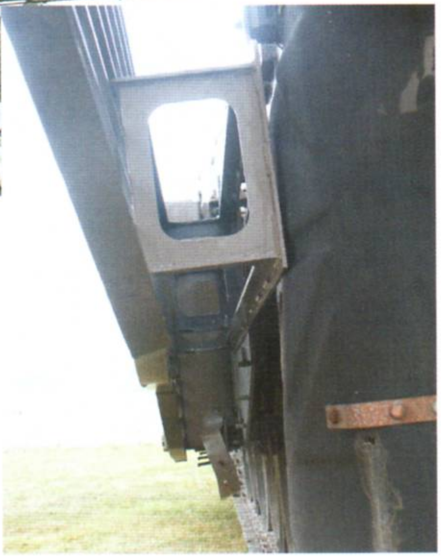


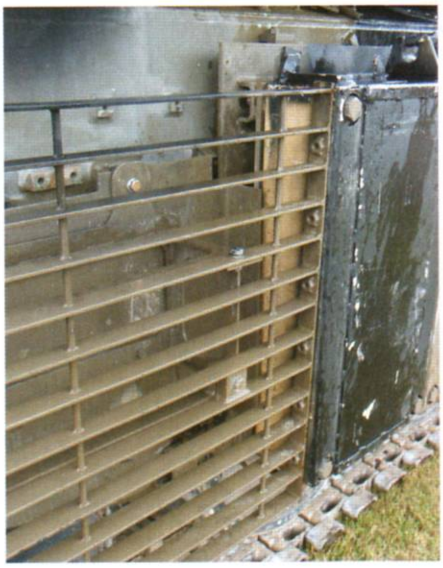
RIGHT: Clear shot of the rear of the turret. Just visible between the slats is the small white stylized ATDU logo denoting that this vehicle belongs to the Armour Trials and Development Unit at Bovington Camp. Clearly shown is the hull front protection which uses reactive armour blocks set in a framework forming a sharp 'Vee'. BELOW: Rear section. This has two attachment brackets bolted to the turret bins, and close inspection shows the small plates which hold side and rear sections together.

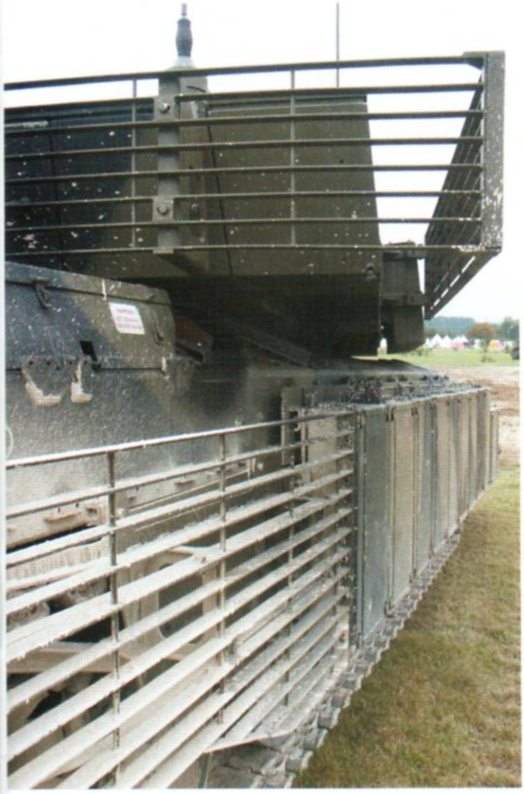




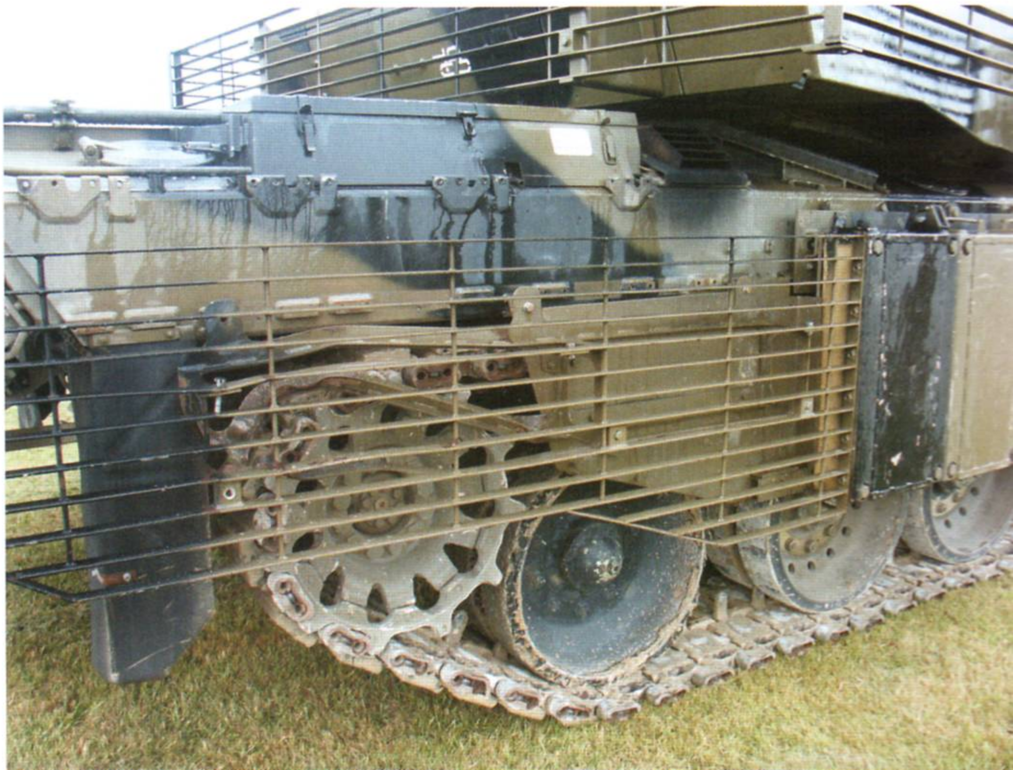
BELOW RIGHT: Closer view of how the panel fits against the rear of the side skirt block, and the mounting frame behind it. BELOW LEFT: The panel is spaced out from the hull side, this view of the left side section from low down looking up and forwards shows the frame with its three vertical spacers.

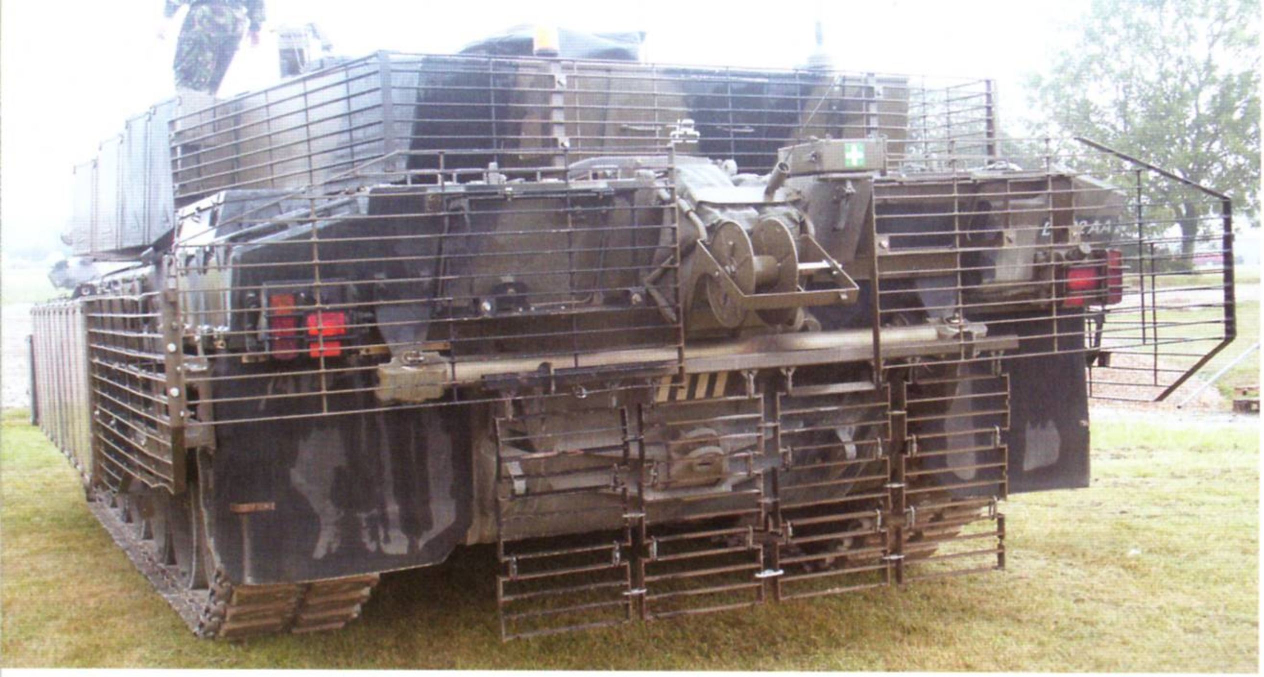




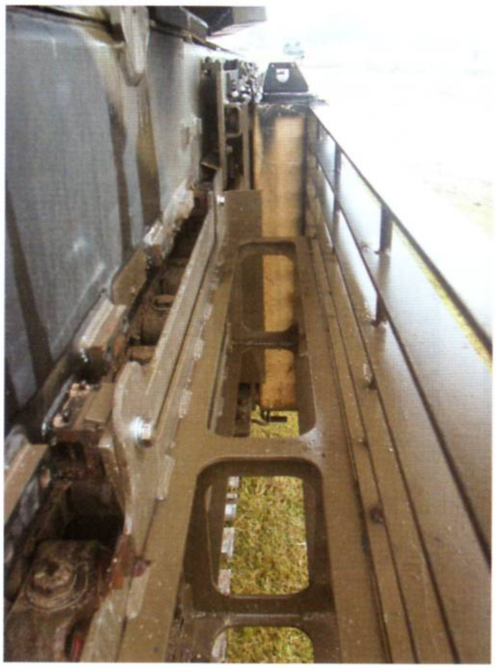


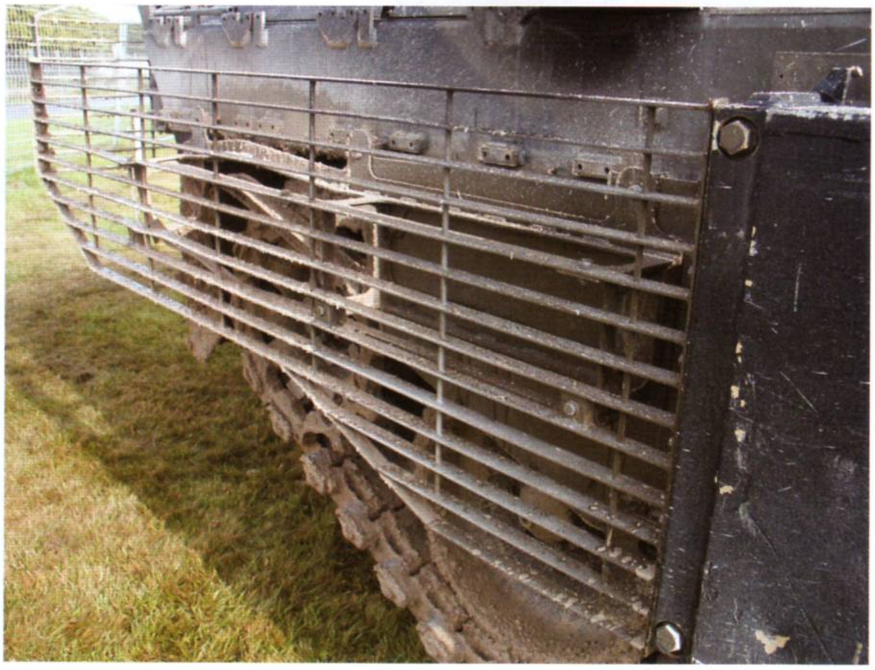
ABOVE: Looking upwards, how the rear panel is attached is revealed, and also a general view of the rear side frame. RIGHT: To protect the engine/transmission compartment and the sprocket, a frame panel is fitted. Note the small skirting plate and attachments.



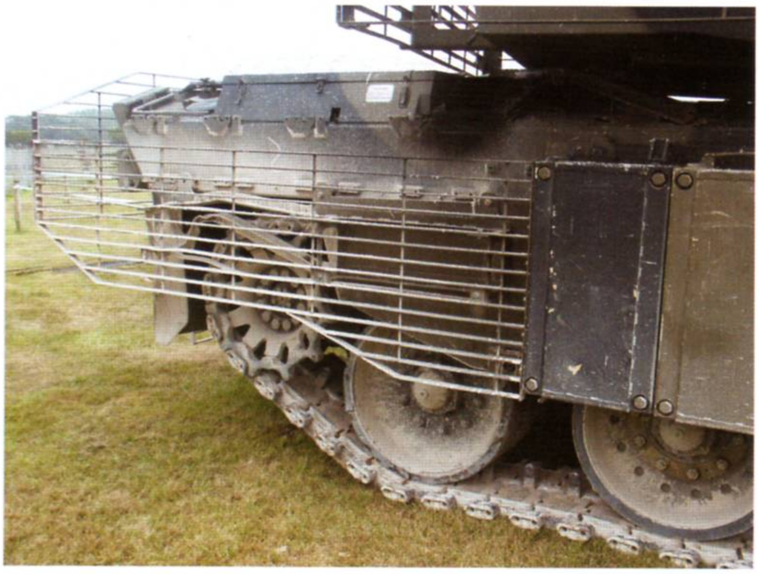


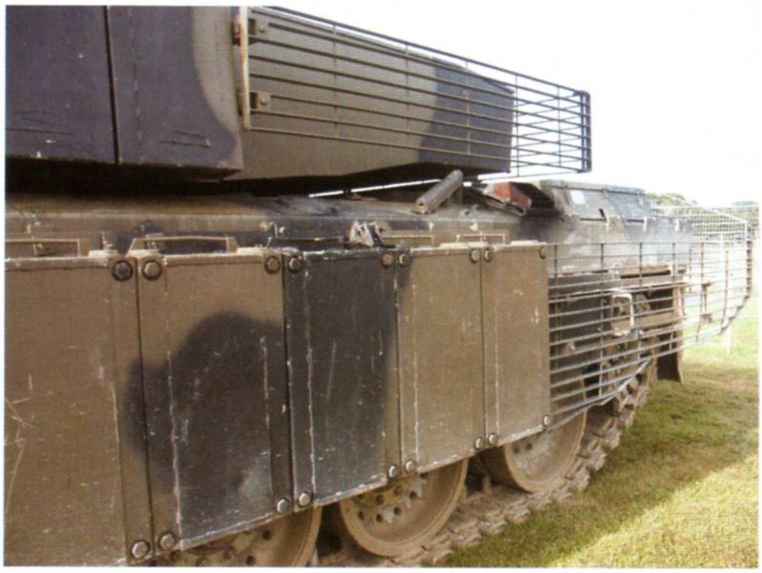
From the back we can see the rear panels are in three main sections. Two fixed sections protect the areas to the sides of the cable reel. Any hollow charge warhead which hit the reel itself would be detonated clear of the hull, so extra protection here would not be needed. Below the reel is a third panel made up of small sections which are hinged. This allows access to the towing gear carried on the back of the tank.

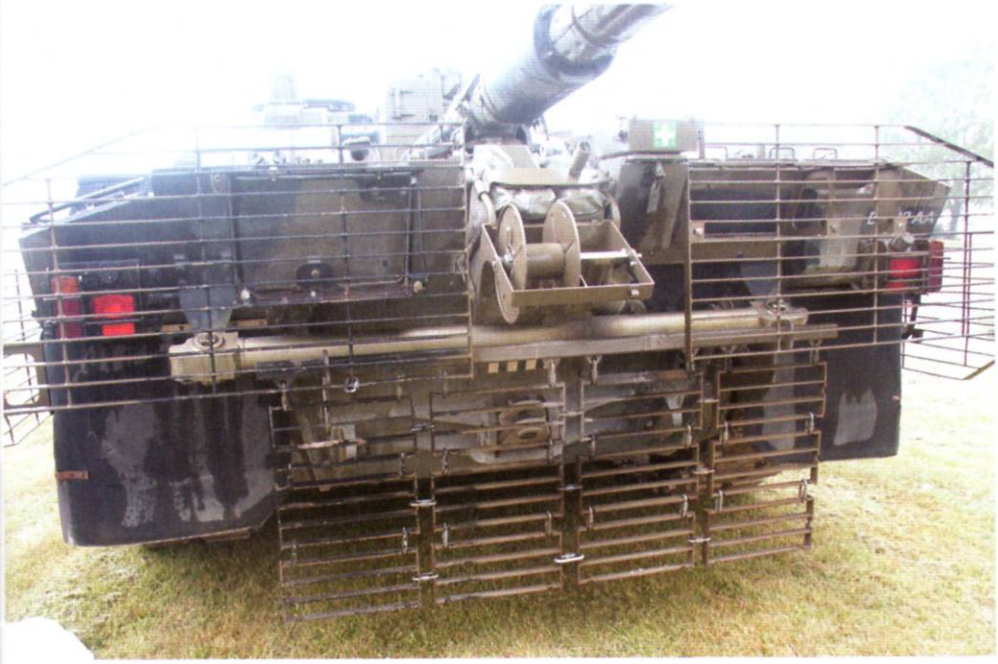


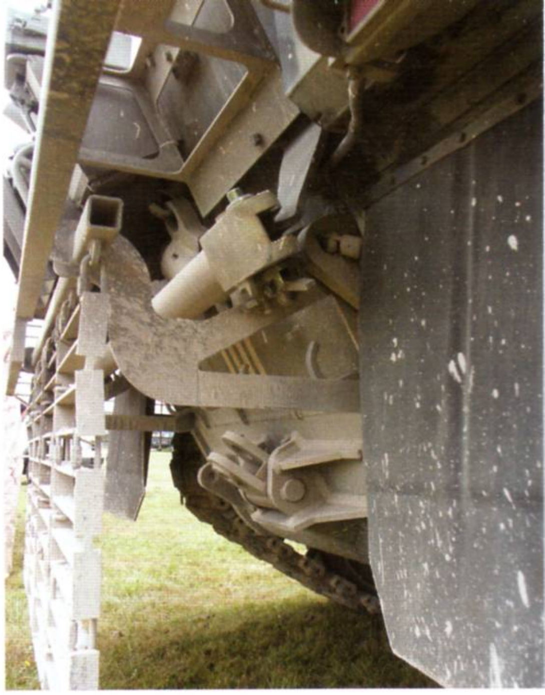


ABOVE LEFT: Seen from above, the bracket is a substantial item. This view shows the right side though the two brackets are mirror images of each other. ABOVE RIGHT: Good view of a complete left rear panel with added mud! BELOW LEFT: Right side panel, the frame appears to have been dented and the rear roadwheel rubber is worn. Note that the wheel ahead of that is the new pattern being fitted to Challenger 2. BELOW RIGHT: Another view from the front which includes the hull protection armour blocks.

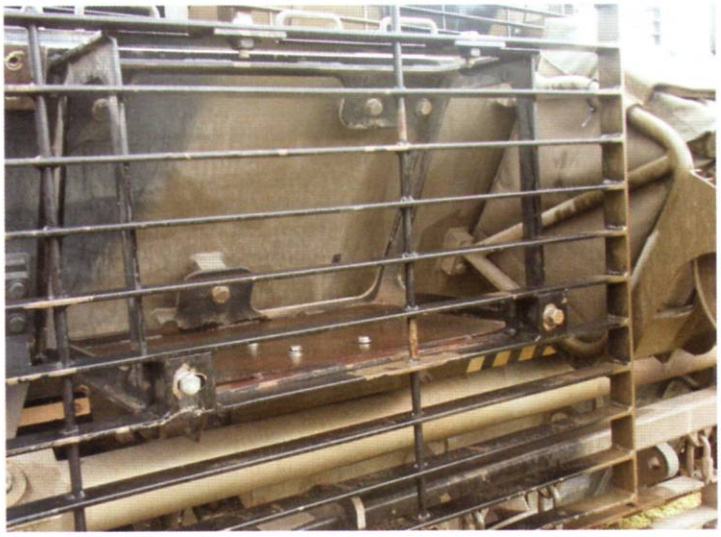


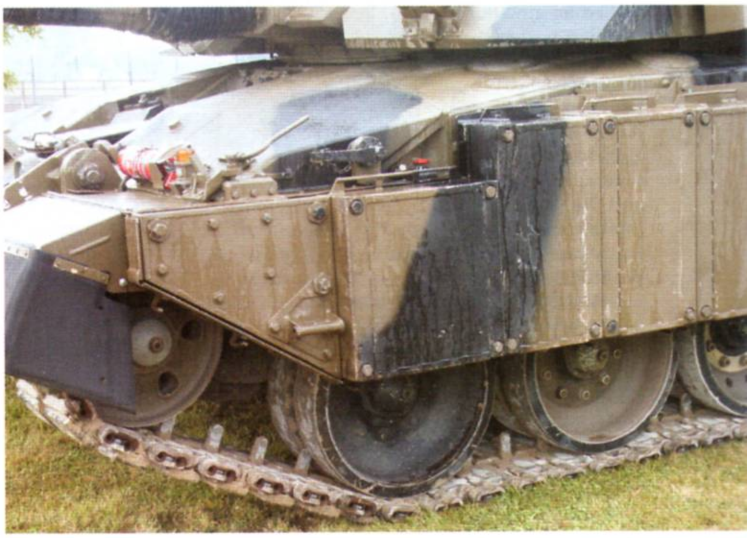




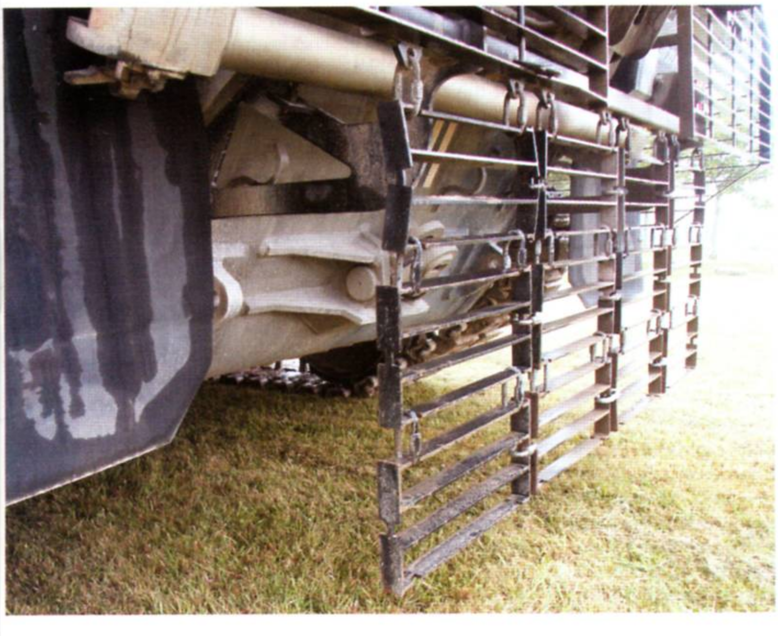


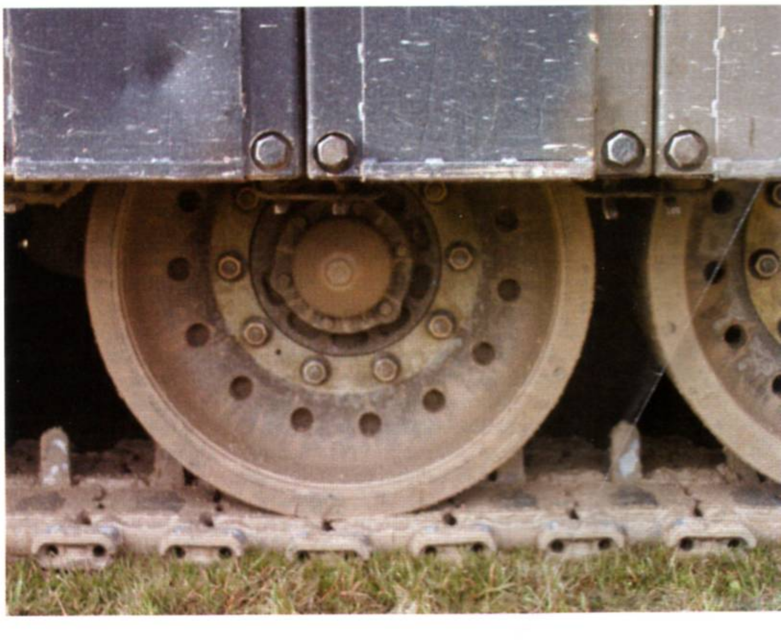
ABOVE: *Hinged panels seen from the side showing the carrying bracket.*





ABOVE LEFT: View of the bracket from behind; note the large flat plate. ABOVE RIGHT: Protection for the hull and running gear is in the form of Chobham blocks forming a skirt. These are not fitted for general training, simple dust skirts being used. Note the step for access on the front block, both front blocks have this.
BELOW LEFT: Hanging sections. Close study of the photo is worth more than a long caption in this case. BELOW RIGHT: Not part of the uparmour package, these are the new pattern of roadwheels being fitted to Challenger 2 in service.





ON PARADE

Books and videos reviewed

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Armoured Vehicles of the British Infantry Brigade Berlin, Tankograd British Special No 9001, Andreas Kirchhoff. Tankograd Publishing, Verlag Jochen Vollert, Wilhelmstr. 2 B, 91052 Erlangen, Germany.
jochenvollert@tankograd.com

Die gepanzerten Fahrzeuge der
British Infantry Brigade
Berlin
Armoured Vehicles of the
British Infantry Brigade Berlin

Following the end of WW2, Germany was controlled by the various Allied powers and the capital city of Berlin was in the Russian-controlled area, with one part under Russian control and the other split between Britain, America and France. Each country stationed troops there, and the British contingent was basically an infantry brigade supported by a reinforced squadron of tanks. Various units served in Berlin before the reunification of Germany meant they were no longer needed.

The vehicles used in Berlin were an unusual mixture. During the later part of its service, many of the supporting wheeled vehicles were provided by the Berlin authorities and were not the same as generally used by the British Army, but the most obvious difference to vehicles stationed there was the unusual camouflage scheme used on its armoured vehicles. This was specific to the area, and was devised in the early 1980s during the period that 4/7 Dragoon Guards were part of Berlin Brigade. Its bold three-tone system was designed to break up a vehicle's outline against an urban backdrop, ideal on the streets where they would have to fight had the Cold War gone 'hot'.

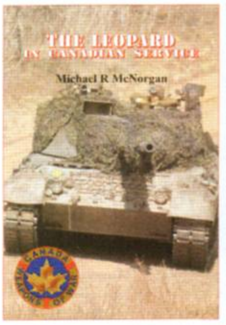
This book shows the scheme in great detail using 119 colour and 23 black-and-white photos, as well as five-view scale drawings of each of the main types. The photos include general views of vehicles on the streets, taking part in the annual Allied Forces Day Parade, on exercise at the special urban warfare training area in Berlin and during firing practice at Soltau-Fallingbostel which allows a view of the unusual mix of urban camouflage and rural dirt. There are separate sections showing each main type from all angles, including views showing them from above, which are ideal for modellers. These cover the Chieftain Mark 10/C with *Stillbrew* armour including a dozer-equipped vehicle, Chieftain ARRV, FV434 light repair vehicle, FV432 APC in troop-carrying and command versions, the unusual FV432/30 with Fox armoured car turret - produced for trials of a Mechanized Infantry Combat Vehicle which was not adopted, the dozen or so vehicles converted being used operationally only in Berlin - the Fox armoured car in both urban and the usual green-black schemes and last, but not least, the Ferret scout car. Two photos also show how the camouflage was painted in real life, which will give a good idea of how it could be done on a model.

The result is a wealth of information and inspiration for anyone wanting to depict AFVs in unusual colours. This may be tricky and not a little frustrating, but surely worth the effort. The patterns were fixed and as they are shown from all angles there is no scope for getting them wrong from a reference point of view. They did not carry a lot of markings, but the photos show what signs were applied, including the Berlin Brigade 'frozen orifice' badge. While this may appear at first sight to have limited appeal, the walk-rounds of the vehicles show many types used over several years and are great reference for the vehicles even if the special colours do not grab you.

Very good and well-worth seeking out if you are interested in British AFVs of the Cold War era, in or out of Berlin. The review copy came from UK distributor Bookworld Wholesale, Unit 10 Hodfar Road, Sandy Lane Industrial Estate, Stourport-on-Severn, Worcestershire DY13 9QB. general@bookworldws.co.uk who can supply for £11.99 plus postage if bought direct. Elsewhere, contact the publisher jochenvollert@tankograd.com

Peter Brown

The Leopard Tank in Canadian Service, Michael R. McNorgan. Service Publications, PO Box 33071, Ottawa, Ontario, Canada K2C 3Y9. www.servicepub.com
ISBN 1-894581-31-8. Price CDN$9.95.



The Canadian Army had used the British Centurion as its main battle tank for several years, but by the start of the 1970s it needed a more modern replacement. After some thoughts of going over to the Scorpion light tank as an air-portable vehicle, the final choice was the German Leopard. Plans were made, but changes and delays meant that the purchase was not made until 1976, by which time a new generation of tanks was all but ready to appear. However, the Leopard 1A4 remained the choice, older 1A2 being tanks leased while they were being built. In the end 128 tanks were bought at a cost far higher than the earlier plans would have been, and the new tanks were used as part of Canada's commitment to NATO and for training at home. To support them, smaller numbers of armoured recovery vehicles, bridgelayers and later engineer variants were purchased.

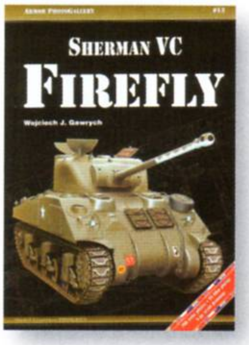
While no longer at the cutting edge of armour technology, the Leopard C1 as it was known in service was far in advance of the old Centurion though as well as some major advantages it had some drawbacks. Its night vision systems were much appreciated, though not the lack of spare space for the crew while the maintenance contract with the manufacturers meant that minor repairs could not always be carried out by the crews themselves. Leopards were to serve well until the great change brought about by the reunification of Germany when they were all shipped 'home' to Canada. Some were deployed to Kosovo in 1999 and the fleet was modernized by the strange, but sensible move of buying ex-German Army 1A5 tanks and fitting the older but modernized A2 turrets with their later generation fire control and add-on armour. More improvements have resulted in even better composite armour packages being developed and fitted, which will extend their useful lives for some time yet.

This account gives full details of the purchase and use of the Canadian Leopard, with accounts by the crews including details of the units using them and the changes in armour policy over the last 25 years or so. It is illustrated with some good black and white photos of the basic gun tanks, tanks fitted with mine rollers and ploughs and dozer blades, and the supporting variants. Brief details of the basic tank are included, enough for those who do not know their Leopards though not a full history which anyway can be found elsewhere. Centre spread gives 1:35 scale four-view plans of a C1. There are a few drawbacks to the coverage, such as not detailing the small, but to the modeller, interesting changes between a stock Leopard 1A4 and the C1 and not much coverage is given of the upgraded C2 or the full add-on armour package.

These small points, and an incorrect caption to the first photo which shows a C2 not a leased 1A2, still leave a good account of the use of the Leopard by the Canadians which will be of interest to modern AFV enthusiasts.

Peter Brown

Sherman VC Firefly, Wojciech J. Gawrych. Armor Photogallery No 13. Model Centrum Progress, www.modelbooks.republika.pl
ISBN 83-920254-6-6. UK Price £14.95 (Pol Models).



This ideal modelling reference for the Sherman VC begins with 260 colour photos of two tanks, with both general and many close-up views. The first 167 are of a tank used by the Belgian Army post-war, which was recently restored to original wartime state as a tank of the Irish Guards at the time of the liberation of Brussels. This is a relatively early production vehicle with direct vision ports for the driver and co-driver, retrofitted with extra armour over these as well as on the hull sides and ahead of the turret gunner's position. Details of the tank's known history are given before full photo coverage - and this means full! Two pages are devoted to the driver and co-driver's hatches with another two to the smoke emitter boxes and towing hook brackets on the rear hull with similar level of coverage of engine decks, turret and hatches, gun, mantlet, suspension and other outside fittings before moving on to the turret and hull interior and more photos of the engine in place.

Following this is similar, but shorter, coverage of the tank at the Swedish Pansarmuseum at Axvall. This is a later production tank with flat-fronted hull hatch bulges, and also has various modifications made after its transfer to Sweden including different radio aerial mountings. Photos concentrate on areas where this tank differs from the one in Belgium so there are fewer of them. Some are useful as they show the rear hull stowage box's fittings as the tank does not have the box in place, and the sequence ends with six images of the Chrysler engine outside the vehicle on a stand.

As if that were not enough, there are two sets of scale plans, which appear to be based on the Brussels tank. These show the vehicle from side, top, front, back, underneath - yes, underneath - as well as the hull top without the turret and the lower hull without any items in place to both 1:48 and 1:35 scales. Additional 1:35 scale views show a stripped hull from the side with mountings for the bogie units and a section through the lower hull plate.

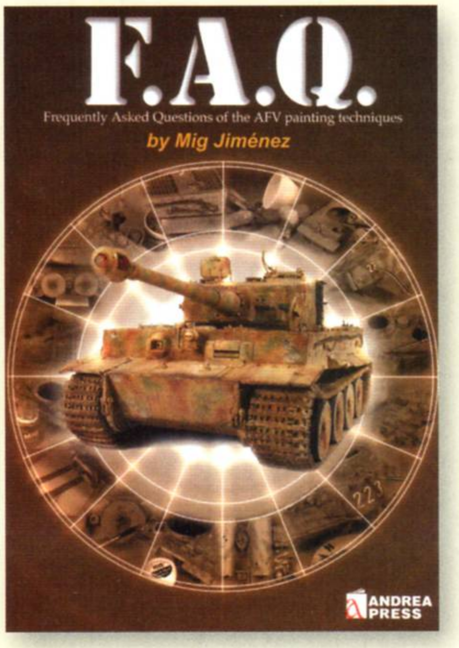
Extracts from the American Technical Manual on the original M4A4 are included that show general views, a bare early-production hull, details of the instrument panel, driver's controls and seat, transmission, final drive, engine, turret and hull crew hatches and even the siren in component form. For the VC itself, the full seven pages of the British Stowage Diagrams are included (though interior views are printed to a small size) along with drawings showing 17 pounder rounds and their ammunition boxes and outline sketches and details of the Mark VC and Mark V.

To complete an already full coverage is a historical section on the basic M4A4 and its place in the Sherman story; details of the Firefly conversion telling what this entailed with production figures and brief service details. This has 45 original photos of the M4A4, early VC record shots and photos of these tanks in service in British, Canadian, New Zealand and, not surprisingly, Polish units. Captions point out where and when the photos were taken with details of unit markings.

Anyone who cannot find enough detail to model the VC Firefly in this book will be very hard to please. If there is a drawback it is the vehicle itself, which included many detail changes in its production so not all the features in the photos are applicable to any one specific tank. That said, many of the details also apply to the Sherman Mark V or M4A4 with the original 75mm gun which can only increase the appeal and value of this book. Stocks are available in the UK from Pol Models, 64 Cumberland Road, London W3 6EY. Tel: 0208 992 3822/0208 1992 5106. Fax: 0181 932 2238. Polmodels@aol.com

Peter Brown

F.A.Q. Frequently Asked Questions of the AFV Painting Techiques, Mig Jiménez. Andrea Press, S.L., Los Talleras, 21-Pol. Ind., de Alpedrete 28430 Alpedrete, Madrid, Spain. andrea@andrea-miniatures.com www.andrea-miniatures.com **ISBN84-96527-62-X. Price: £39.95 + £3.80.**



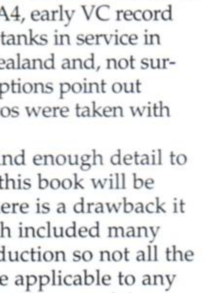
'Everyone has a book in them', is a remark we hear bandied about, and this is certainly true in modelling circles. 'FAQ' is 'the one' from inside of Mig Jiménez, the Spanish modeller (and manufacturer of his own line of products), which comes fired with the passion for the hobby Mig so obviously possesses. It's not his first book, *Rarities* was that (which I think I remember playing some very small part in), but this is 'the' book into which he's put his heart and soul.

Mig's introduction explains that his first language is not English and he wrote the book in his native Castellano. Pity to spoil the job for a ha'p'orth of tar, where a read through by an English editor with specialist knowledge should have been arranged by the publisher, that would have made this perfect - for beginners and experienced modellers alike. No matter which way you look at it English *is* the international language of modellers. Unfortunately, the FAQ in the title followed by *'Questions of the AFV Painting Techniques'* makes the point before you open it. But then, packed with pictures and only a few textural glitches this is really excellent stuff, and you'll soon forget such things.

Mig manages to cover virtually 'the lot' and pack it into the book's 250-plus pages. For the price I would have liked to have seen a hard cover on it, it really deserves one, because this is a book that will see constant use and be pressed open, folded back as a working aid and as a heavy paperback, it's perfect binding just may not be up to the stresses made on it by the modeller. Mig relates the 'names' that have inspired him and helped him over the years since he began modelling and acknowledges their help. Tools, paints, building, and Mig's real love, painting and finishing, are all covered in great detail, with technique after technique, page after page. If I was now asked to recommend a book for beginners to vehicle modelling I wouldn't hesitate to recommend this one. Others have got near to producing books like this, Mig has not only got near, but he's passed the winning post lengths ahead with this one. It's pointless giving a blow by blow tally of the content you will be amazed at what is within and nit picks aside, it's the best practical modelling book of its type that I've seen in well over 50 years or more since I first reached for a tube of glue! Or was it a paintbrush?

Ken Jones

The Skink in Canadian Service, Roger V. Lucy. Service Publications, PO Box 33071, Ottawa, Ontario, Canada K2C 3Y9. www.servicepub.com **ISBN 1-894581-29-6. Price CDN$9.95.**



The effectiveness of the German *Luftwaffe* in the ground support role during the early campaigns in WW2 led to the development of several types of armoured, self-propelled antiaircraft vehicles to protect tank units. One of the more unusual was the Canadian Skink which carried four 20mm guns in a powered, armoured, fully-enclosed turret. Designed to be fitted to the Grizzly, which was the Canadian-built Sherman M4A1, it was at times also intended to have been fitted to other Sherman chassis. Sadly for all those who worked on the design, by the time it was ready for use the air threat it was intended to guard against was gone and it was simply no longer needed.

Despite that it remains an interesting vehicle to study. Its development history is covered well here, from early concepts on to the production of a wooden mock-up turret, an all-metal welded version and the final cast design. Accounts of tests and trials are included, as is the delay in development caused by the high-level decision to not field the original Hispano-Suiza cannons it was to carry which meant a rapid redesign to use the Polsten gun. Production contracts were drawn up, changed and eventually cancelled when it was realised the system would not be needed as the Allied air forces had more than coped with the German airforce before Skinks could be made and put into the field, and the integral AA vehicles in tank units had for the most part been withdrawn from use.

As it turned out, two complete Skinks were produced and one was shipped to the United Kingdom for trials. Although there were problems due to poorly-made magazines, it performed well and offered several advantages over the British Crusader and Centaur AA tanks, not least being its greater firepower with four guns against the two in the other designs. The Skink was then shipped to Europe where it was demonstrated to Canadian armoured units in early 1945 and used in limited actions with some success.

While it was not the most widely-used vehicle of the war, a Skink would make an interesting model based on an M4A1 kit with suitable modifications and a new turret. Photos of the vehicle included in this book show it from various angles, these along with original drawings and 1:35 scale plans should be more than enough for a reasonably skilled modeller to produce one. Conversion kits have been produced in the past though they may be hard to find nowadays, and need work to produce a good result. For those who are more interested in history and design, the text gives a complete account with details of possible use, production and trials with details of the fate of some of the parts produced for the programme. As with other Service Publications books, new light is shed onto a subject and while Skink may not be unknown, it has not been given such good coverage before. Congratulations are due to the author for all his work, and thanks to the publishers for producing the book and sending a copy for review.

Peter Brown

The First

John Boyton builds Eduard's 1:16 scale Schwimmwagen - and makes a few changes along the way to model Volkswagen 's1661 pre-production version!

After the outbreak of World War II it was soon realized that the Volkswagen car would make the ideal basis for a military vehicle. The *Kübelwagen* had been in production since 1939 with the production version, Type 82, entering series production in 1940. An amphibious version of the *Kübelwagen* was seen as being an advantage and so development was undertaken.

The first *Schwimmwagen* looked very similar to the *Kübelwagen*, on which it was based, but as development continued the Type 128 evolved. This vehicle underwent continuous development becoming shorter, slimmer and lower, the final result being the Type 166. During the development stages a link occurred; that is a vehicle that had features of the Type 128, but looked more like the Type 166, and this was going to be the version I was going to make.

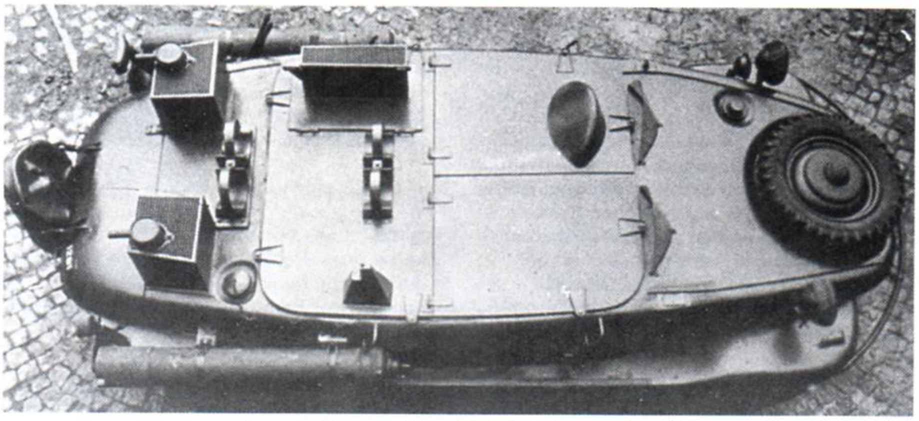
The 1661 was the first hand-built Type 166 *Schwimmwagen,* built by Porsche, which was shown to Adolf Hitler in August 1941 at the *Wolfschanze* in Rastenburg. Himmler, Jodl and General Wolff were also in attendance to see the prototype.

For a donor kit the new injection moulded plastic model of the Type 166 *Schwimmwagen* released by Eduard as kit No.6106 in 1:16 scale was used. When the kit was announced I was full of hope, as I had previously built the 1:16 scale resin model from MPM, which was poorly detailed and I was, therefore, hoping for a much better-detailed model. Unfortunately, the Eduard kit is based on the MPM kit and, as such, suffers from poor detailing.

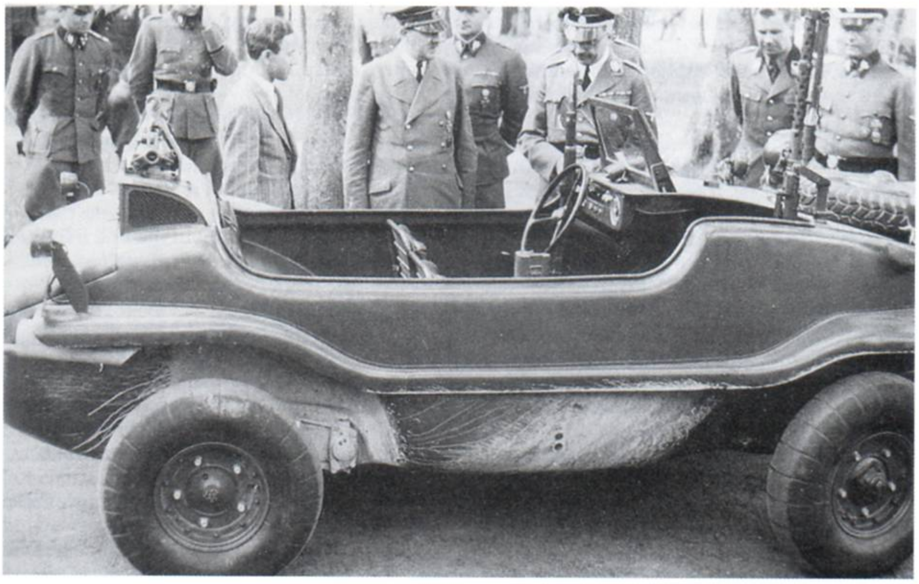
One of the main reasons for building the 1661 was that I would be able to use the kit's strengths and lose some of the kit's weaknesses. After trawling the Internet looking for additional information on 1661 I found that only four photos exist of the vehicle. This was a godsend and a curse rolled into one. On the one hand, the model would have to be built as the single vehicle in the photos with no concerns that there were minor changes in different vehicles in the production run and, on the other hand, some areas of the vehicle were not shown and educated guesses would have to be made.

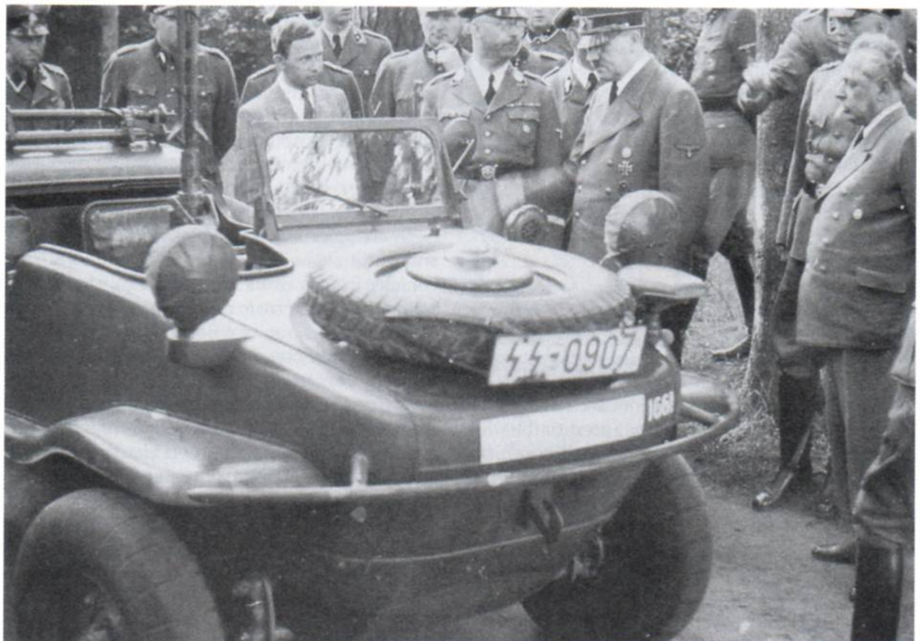
Wheel Change

The Eduard kit has standard wheels and hubs supplied, which is correct, but 1661 had balloon tyres fitted. I decided to use the balloon tyres from the Tamiya kit, No.36202, *Kübelwagen* Type 82, *Afrika Korps*. To enable the Tamiya wheels to fit the Eduard hubs, I had to cut the hub off the backing section and remove the centre hub cap from the Tamiya wheels. I used a razor saw to remove the Eduard hubs from the main moulding and drilled out the centre section from the Tamiya wheels using an 8mm drill bit. To guarantee that the centre was completely round I wrapped a piece of wet and dry paper around a drill bit and gently turned the bit inside the centre hole. The rear of the Tamiya wheels were counter sunk, using a counter sink drill bit, as this ensured that the Eduard hubs would fit tightly to the back of the Tamiya wheels. With the wheels finished I decided that I would tackle the interior of the model next.

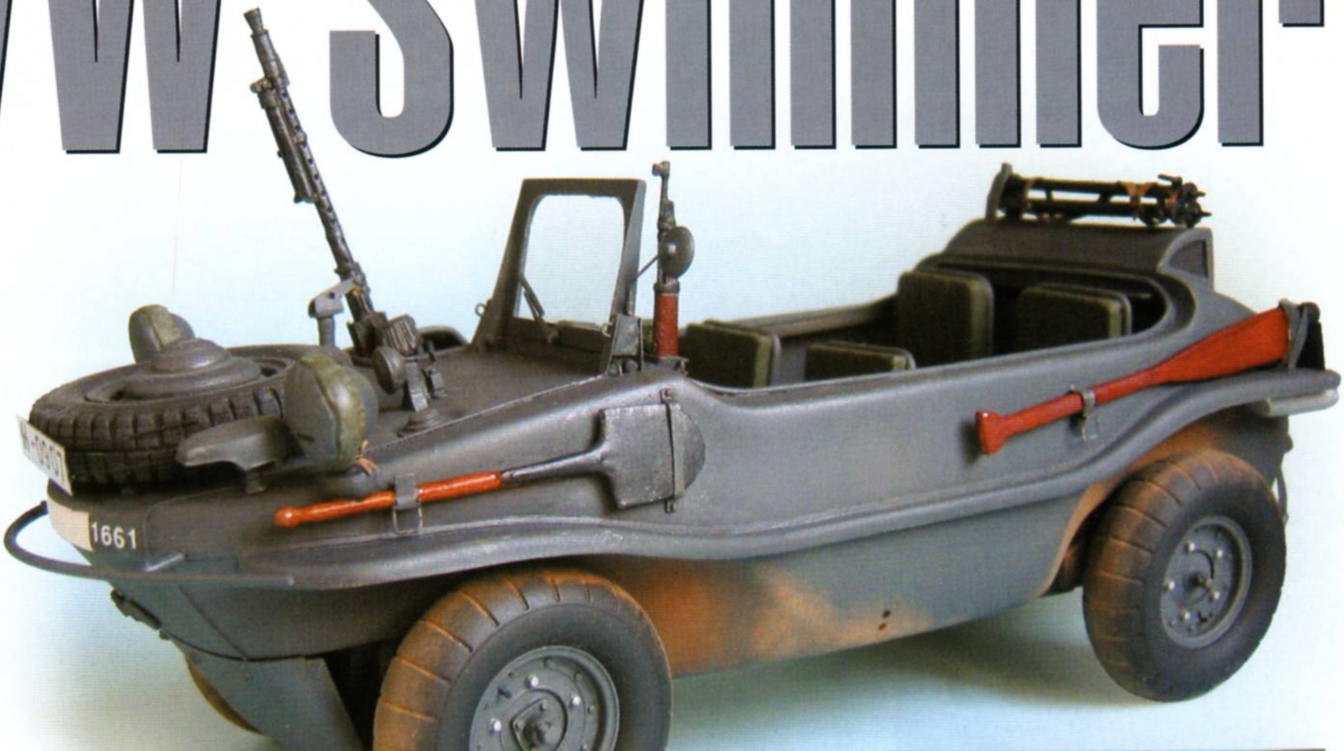


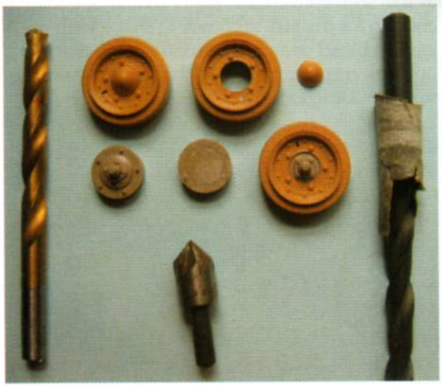
ABOVE: Note the low level filler cap in this overhead view of an early Schwimmwagen fitted with top protective covers. BELOW: Hitler inspects a pre-production VW 1661 Schwimmwagen with an SS number plate in 1941. The type number is painted on the left front side and the spare wheel has a Continental 5.25 x16 treaded pattern tyre of the type fitted to the Kübelwagen and Schwimmwagen.





VW Swimmer



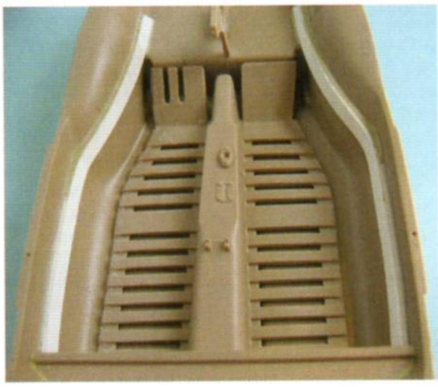


Alteration to the Tamiya kit's wheels was made with twist drills, sandpaper and a countersink bit as described in the text.

Body Changes

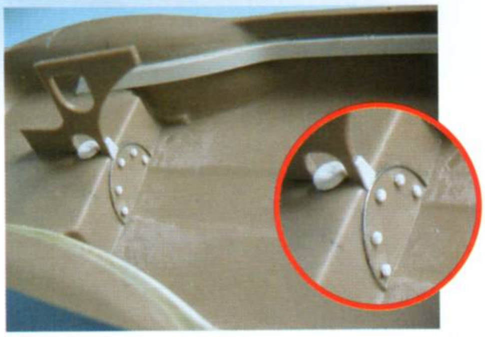
The 1661 has a reinforcing lateral ribs welded to the inside the vehicle one on each side which, I presume, was due to the fact that the prototype was hand-built and the designers thought the interior would need bracing. Careful study of the photos shows the ribs quite well, but I feel that the ribs were only small, not ones that went mid-way down the side to the hull bottom. Plastic card was used for the ribs, with two pieces of 80 thou plastic card being glued to each other and any seams were sanded and blended in using Milliput.

I did notice that the bolts that hold the front axle to the interior of the hull were missing, so these were added punched from plastic card using the hexagonal punch and die set from Historex Agents, of Dover.

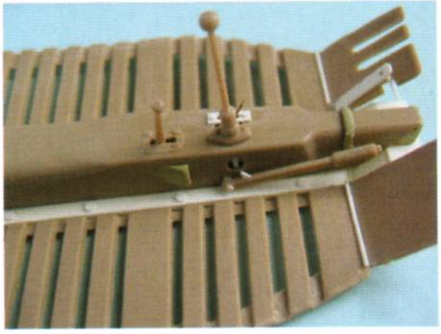


The kit's side rails were removed and new ones made up from plastic card were fitted.

The Eduard kit has the transmission housing, including the wooden floor boards and the side bracing ribs, moulded in as one piece, but as 1661 had the ribs separate from the floor panel, the two side bracing ribs were cut off using the razor saw. This meant that the wooden floor section was not wide enough to fit into the hull bottom. Looking at reference photos it is clear to see that the floor boards sat on raised ribs inside the hull, one along the transmission housing and one welded to the hull side. I cut the floor section off the transmission housing and added a fillet from plastic card to take up the missing few millimetres; this was then detailed using the punch and die set At this stage I also added and corrected some of the finer details missing from the transmission housing.



Bolts were fitted around the plate of the rear transmission housing.

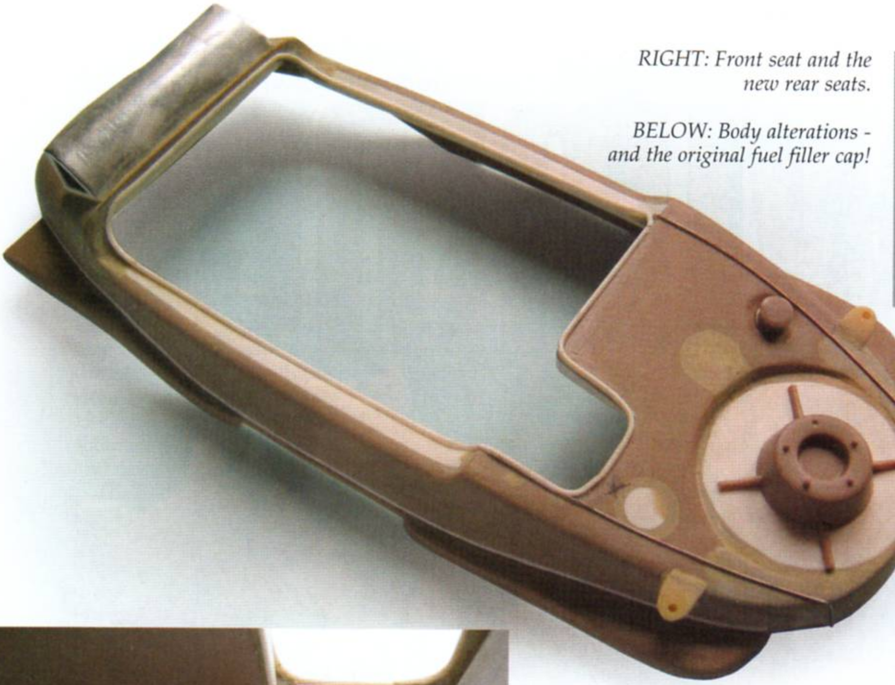


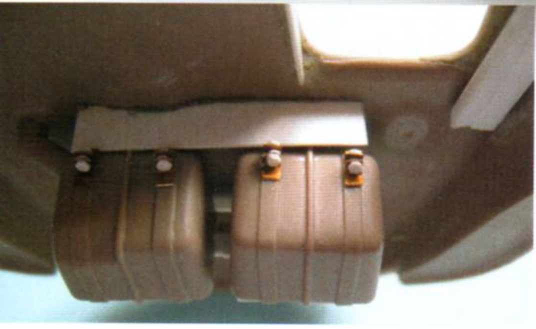
Transmission housing with fillets and additions, and duckboards for the floor either side.

Putting the interior aside I decided to make up the front axle. This again is poorly researched and detailed, but as most of this area will not be visible on the finished model I did not go overboard on the details. I added some brake cables and the tubes which would carry the lubrication oil for the front wheels from telephone wire and by stripping some of the outer insulation was able to have two thicknesses of cable available.

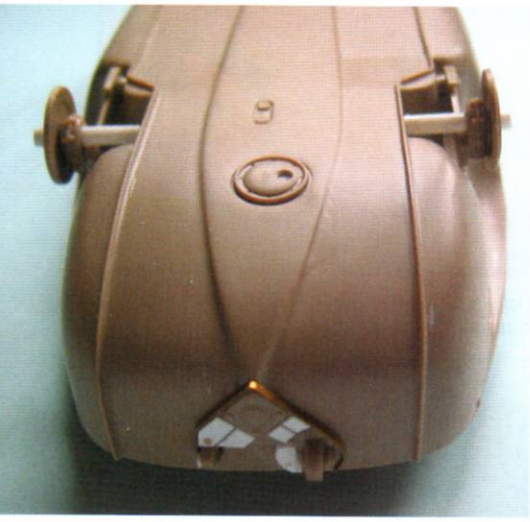
RIGHT: *Front seat and the new rear seats.*

BELOW: *Body alterations - and the original fuel filler cap!*

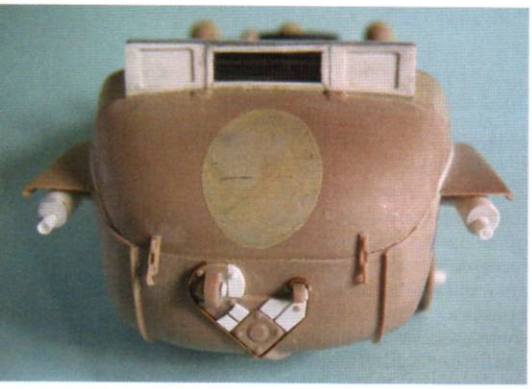




Twin fuel tanks at the front, but only one filler tube.



The propeller mount and new rear axle added.



Rear end alterations - note the propeller housing dip filled in completely.

During the building of the model I bounced around from one area to another, detailing pieces as I went. The advantage of this was that I only had to concentrate on a specific area each time and thus did not feel overwhelmed by the level of detail that needed adding to the model. The headlights were simple to alter; I did use the supplied clear lenses as these gave the correct shape to the front section, but the Milliput does cover these up completely, the extension tubes were simply plastic rod glued into the bases with the ' laces' being made from telephone wire again.

The propeller assembly is very badly made and really does not capture the look of the production version at all well, but as photos of this area are non-existent I decided to alter it only slightly and with tongue firmly in cheek say that the 1661 propeller assembly was slightly different to the production one (prove me wrong!) Anybody wishing to correct the assembly will have to remove the attachment bracket and completely scratch-build a new one as this is undersized and wrong in shape.

The seats in 1661 were taken from a *Kübelwagen* and so the seats from the Tamiya kit were the ideal replacement that could be used. The only problem with this was that there are two separate front seats in the kit and a long bench seat for the rear. What I did in the end, was to cut the bench seat into the correct width, the same as the front seats and then add plastic card to the sides and bases to fill in the gaps. The next step was the big one, altering the body shell to match the profile of 1661.

After a lot of study of the photos I drew a line in pencil where the MG cut-out would be and proceeded to cut away the plastic. Fist of all I drilled some holes near the corners of the location of the cut-out would and then used the razor saw to remove the unwanted plastic. Once the excess was out of the way I smoothed all the edges using wet and dry paper. The sides of 1661 were not as wide as the production vehicles and so the width was reduced as well. I added the tubular edge to the top of the hull, using plastic rod and once the glue had started to soften the plastic it was not too difficult to bend the rod to the shape of the rim. The rear portion of the cabin hull is slightly different, being more rounded in shape and so the profile was altered using Milliput epoxy putty. While the Milliput was out I also had to alter the front section of the nose, the spare wheel did not sit as low on 1661 and the front part was not as curved. I cut a circle of plastic card to fill the main tyre area and then blended all this in using Milliput. The mounting plate for the spare wheel has shorter legs than the production versions, so these were cut down before being glued on.

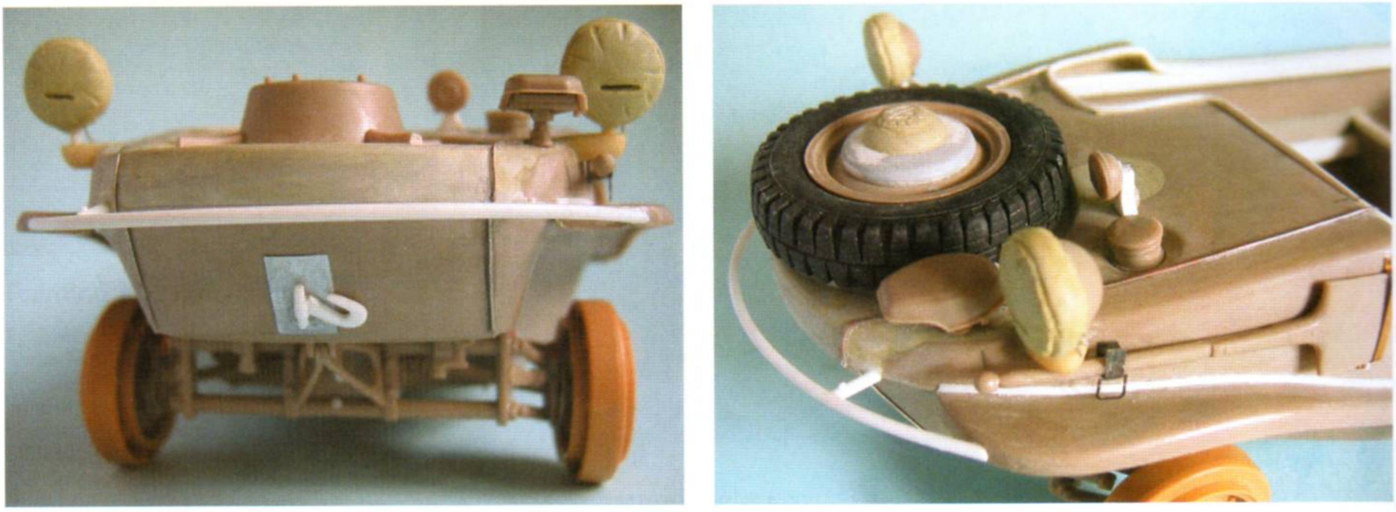
Two of the dips on the front top plate were also filled in as they were excess to requirement. I used plastic card to fill most of the dip and Milliput to fill the rest. I did add the fuel filler tower using the original kit supplied item, but later on this was removed and a lower one substituted. This is actually the cap which would cover the oil pipes that are used to pressurise the system that keeps water out of the drive system. The reason I chose this cap is that in the four photos the cap to the fuel tanks is not visible, which means that the cap must be smaller and lower than normal production versions, but there is a photo which shows a *Schwimmwagen* which was designed to be a remote controlled bomb (see reference section) where the oil cap was used in place of the fuel cap, which is why I thought it would be plausible.

The two 'stalks' for the front lights were carved from a piece of resin I had lying around as this seemed the ideal material to use, thick enough for the task and easy to shape with no joins to blend or smooth. Another area that did not look correct at first was the seams where the sides are joined to the upper front plate. I realized that the seams on 1661 were further inboard than on the production vehicles and so the moulded-on seams were removed and new seams added using pieces of telephone wire. After cutting off a length of wire it was rolled flat using a 12-inch metal ruler, which not only straightened the wire but gave it a slightly rough texture, that fits well with the look I was after.

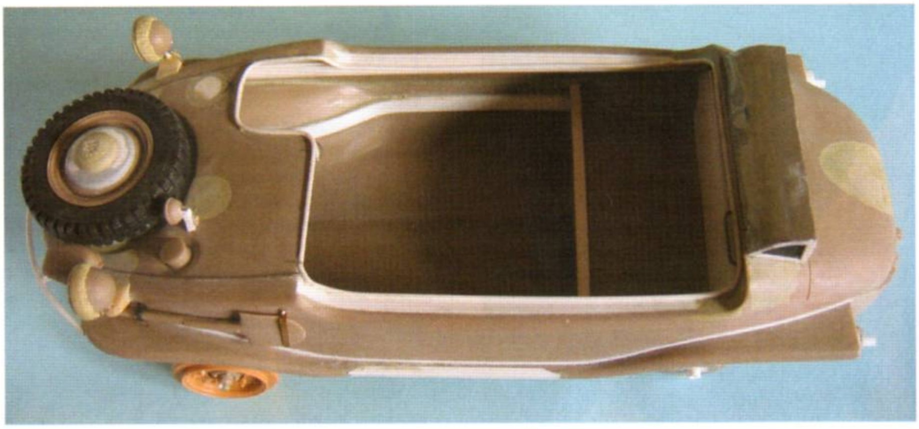
The air intake shroud at the rear of the model caused a few problems, but only in as much that I did not have a lot of references which showed this area. Using a line drawing and photos of the Type 128 and a 'Mark One Eye Ball', I was able to scratch build the housing using plastic card, thin aluminium foil and some mesh.

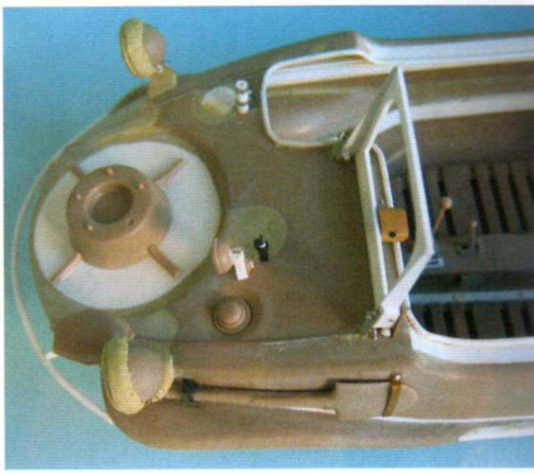
The fuel tanks are under the front part of the *Schwimmwagen* and as I could not be sure if one or two tanks were present, I decided to use the two supplied in the kit, but only add one fuel filler pipe, I added a few details to the tanks, but as these are virtually invisible on the finished model did not go too far. This part was set aside and the lower hull was next for attention.

The rear mounting bracket and plate for the propeller assembly are not even close to the real shape of the real deal, so out came the plastic card and brass strip. These additions are not hard to correct, but like a lot of this kit they should have been better researched. The Eduard kit would have you mount the rear suspension using two small pieces of plastic rod, which are parts D24, and supposed to be glued in between the hull sides and the rear of

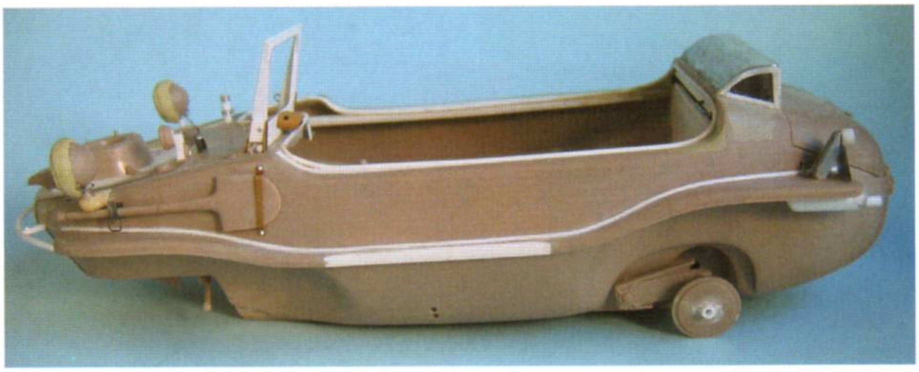


Alterations to the front end of the model showing the front torsion bar suspension fitted with the Tamiya wheels and the spare wheel in place. The front brush bar (bumper) is heat-formed plastic rod.





ABOVE: An overhead view shows the alterations needed to the Eduard kit body.
BELOW: Windscreen and lights fitted.



Left side rear light detail.

the wheel assembly. Past experience has shown that the weight of the model would eventually cause these to bow or even break so I drilled through the body and inserted a piece of plastic tubing right through it. The wheel assemblies were also drilled so that they slipped onto the tubing and gave a really strong and secure fixing for the model.

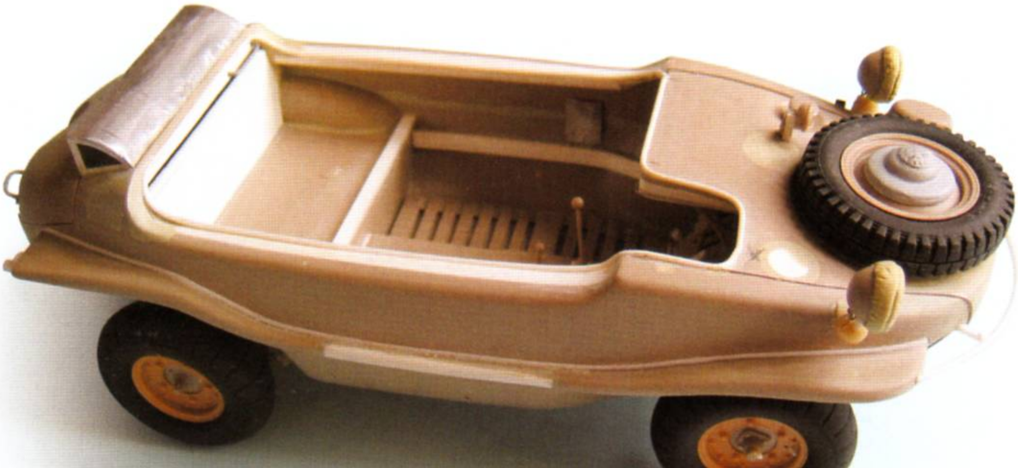
As I offered up the rear wheels I found that the original hubs as supplied by Eduard would not fit onto the bodywork as the Tamiya rims were deeper than the original rims. To gain some space I had to add a spacer of plastic card behind the hub and drill them out to accept the plastic rod and tubing already in place.

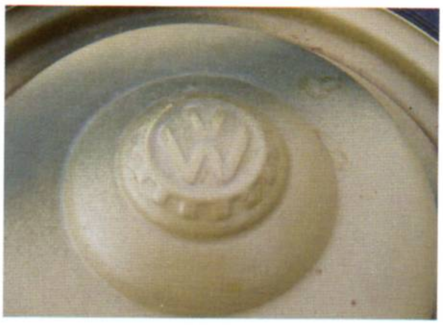
With most of the detailing complete, it was time to join both halves of the model together. I had heard from other modellers that there might be problems at this stage, but these were very minor, the biggest part of the problem was that the joint between both halves was very prominent. I glued and clamped both pieces together and set them aside for a day to make sure that they would be held together securely. After the rest period I added Milliput to the joint area and blended the top and bottom pieces together using a paint brush dipped in water to obtain a smooth finish. With the two halves joined I could then add some of the missing details to the fuel system, which is hard to see on the finished model, but at least I know it is there.

The 1661 only has one tow hook, at the front, which is good news as the kit-supplied tow hook is poorly shaped. I made a new one from card with a better detailed mounting bracket. Unlike the production version the tow hook is not in a recessed area, but bolted onto a plate on the front. I filled the recess in the area on the front with Milliput where this is positioned and added a blanking plate from aluminium foil. The front bumper is just a piece of plastic rod warmed and bent to shape, with support brackets added once set.

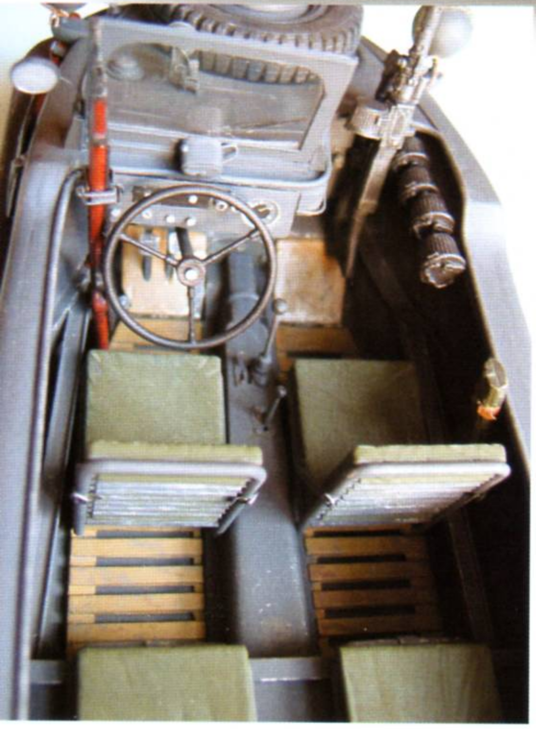
Where possible I tried to use the kit-supplied items, but as most were poorly made a lot of these were replaced with scratch built parts. The spare wheel was made using the original wheel and tyre from Eduard, with a centre boss created from card and Milliput for the VW emblem. The rest of the front had the Eduard details added as these are moulded quite well, the horn on 1661 was on a small bracket, which I created using plastic card and the lower front axle protector had all the ribs removed as these were not present on 1661.

The rear of the model does not have too many additions, namely the locking latches for the engine cover and the engine access



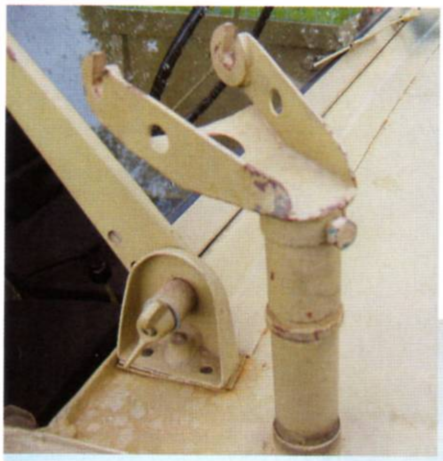


Spare wheel hub details with VW motif.



Interior details - note the four MG34 machine gun ammunition drums on the right side of the body.

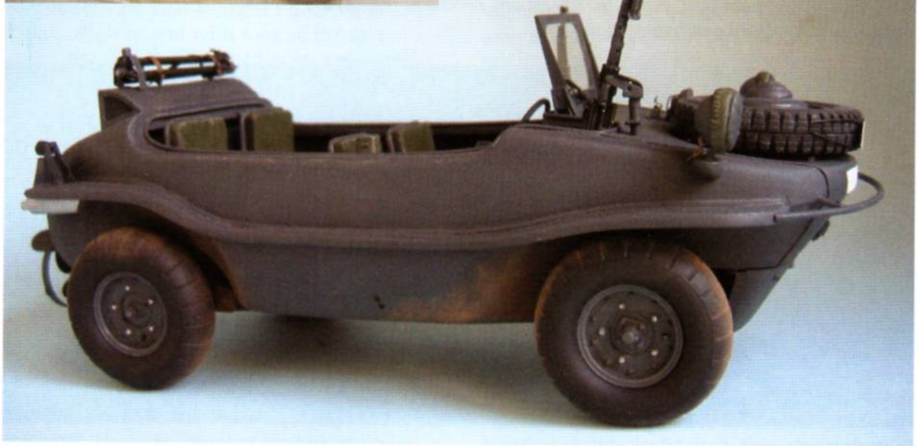
ABOVE: A dry assembly run with all wheels in place. BELOW: The front machine gun pedestal mount which could take either an MG30 or MG34.



The windscreen took a couple of tries to get right. I had loaded the four photos of 1661 onto my computer and I spent ages enlarging the photos to make sure that I could add the details which were easier to see on the bigger photos. Items like the windscreen do not look that difficult to reproduce, but to guarantee that all fitted correct and true did take some time. The only additions I did borrow from another kit were the wiper motor and windscreen wiper from the Verlinden *Kübelwagen*.

The 1661 was the only *Schwimmwagen* with two rear lights and as they were the early round type, they would have to be scratch built. Aluminium foil was used for the brackets because it saved having joints which would need to be smoothed. The same aluminium was used for the number plates and plastic tube was used for the light housings, using Milliput to separate the upper and lower potions, whereas the cable is trusty old telephone wire.

The model was nearly ready for paint, but I had a whole jumble of small parts that were handle, for which I used the kit pieces and the new exhausts, which I scratch built from tube and rod. Now! One item that I altered and later changed was the recess for the propeller; it has been said that 1661 did not have a recess for the 'prop' but given the lineage of the vehicle I felt that as the *Kübel/Schwimm*, the Type 128 and the production Type 166 versions all had recesses, that the 1661 would have one. I did completely fill in the recess using Milliput early on in the build, but later on removed it and substituted a slightly smaller piece of Milliput to the recess area making it smaller than originally moulded.



The finished model was painted in plain dark blue grey and fitted with 'balloon' tyres. Light weathering based on the original 1941 black and white photographs has been applied.

easier to spray and paint off the model and then glued on. Two of the major items that I could not add were the interior side rails that run between the front wheel arch and the rear of the vehicle. Until the floor pan had been completely painted, weathered and installed these rails could not be added. I had made the rails earlier along with the new dashboard and these were sprayed at the same time as the other assemblies.

Painting and finishing

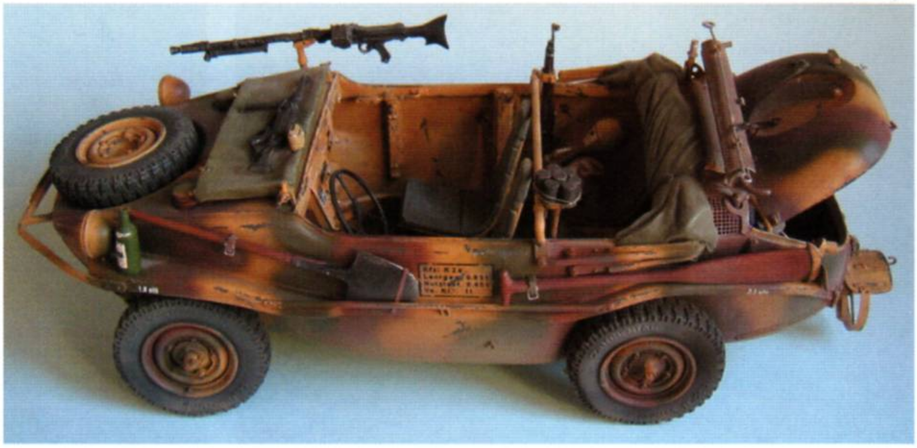
I painted the seats using Humbrol US Dark Green 116 and the floorboards Natural Wood 110. The Green was lightened with successive coats of White 34 dry-brushed on and the floorboards had random colours added including Grey to give them a slightly used colour.

The MG tripod was really quite fun to build from scratch, only because I had taken some photos of a real one at the War & Peace Show in Kent. The oar from the kit was used, but it was altered slightly to better represent the issued types seen in period photographs. I made a new cup for the oar blade to sit in on the body as there isn't one supplied in the kit. This was painted and lightly weathered whilst off the model and added later.

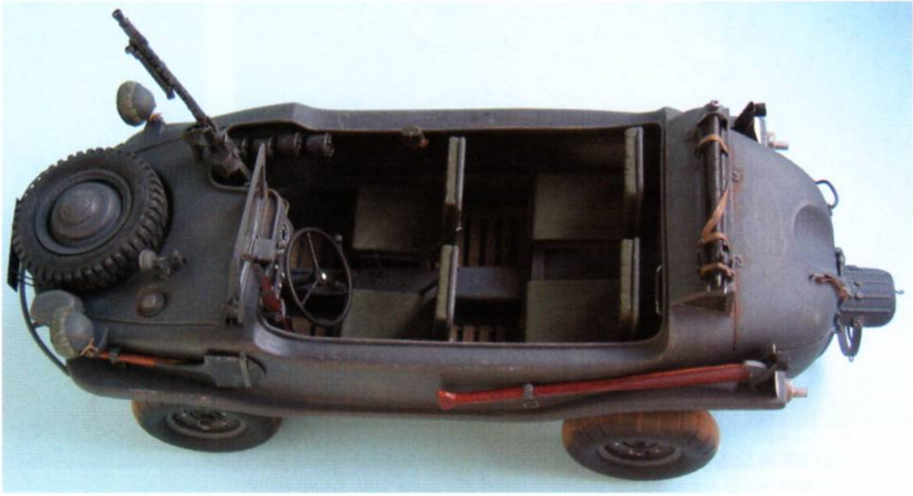
The MG34, double replacement barrel container and the Kar 98K are from the Verlinden range and again these were painted and weathered separately before being added to the model. The MG34 ammunition drums (actually 50 round belt boxes) were a bit of a pain to find, as I needed four of them, but in the end I was able to raid my 1:16 scale Dragon figures' spares to get enough for the project.

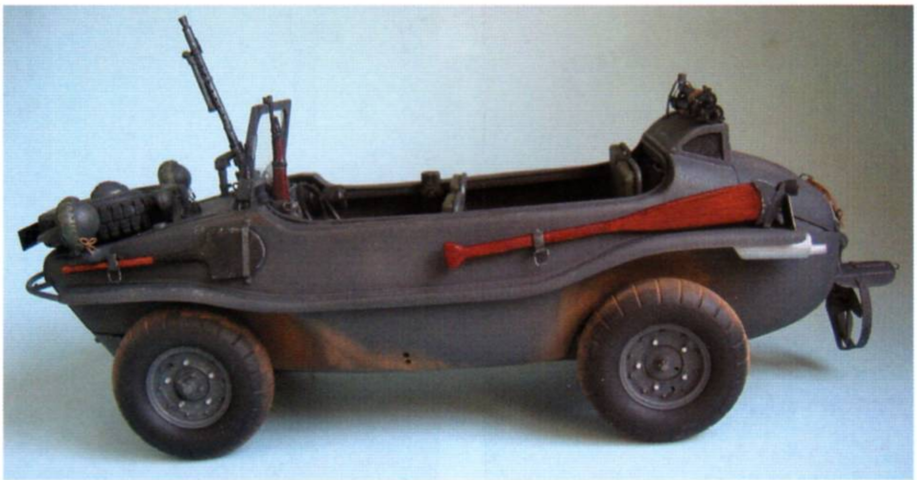
I have always used Humbrol enamels for my models as I find that they always give a dead matt finish, although on this occasion I was really after a semi-gloss look as the photos seem to show the *Schwimmwagen* with a polished finish. Luckily I have found that if a heavy layer of Humbrol Matt Varnish 49 is applied to the model and then a second coat applied very quickly a semi-gloss finish can be achieved. With this knowledge I sprayed the model using Humbrol Matt Tank Grey 67, and once this had dried I mixed some Humbrol Matt Flesh 61 with the grey and sprayed this onto the model, trying to get a light dusting onto the upper areas to help break up the monotone of the grey and add some light and darker areas to the paint. I left the model for 24 hours then sprayed the varnish on and thankfully it did take on a glossy look. I then applied a wash using white spirit with Burnt Umber oil paint and Humbrol Black 33 enamel, to age the paint work. The tools on the model were painted to represent near new items and for this I undercoated the plastic with Humbrol Desert Yellow 93 and then brushed on Burnt Sienna and Raw Umber oil paint to give them the streaky grained look. I used some MIG weathering powders to give the model a dirtied look but had to be restrained as the real vehicle was nearly pristine when it was shown to Hitler. The white 1661 and the black *SS* number are from Letraset, but the *SS* runes are hand-painted.

All-in-all this was not a really difficult conversion and by using the strengths of the kit, i.e. , being plastic, good body shape and cheap(ish) helped outweigh the poor detailing and lack of proper research by Eduard. Anybody wanting to see how to build this kit into an accurate Type 166 should look at http://tanxheaven.com/modelgallery.htm where Liejon Schoot shows how it should be done!



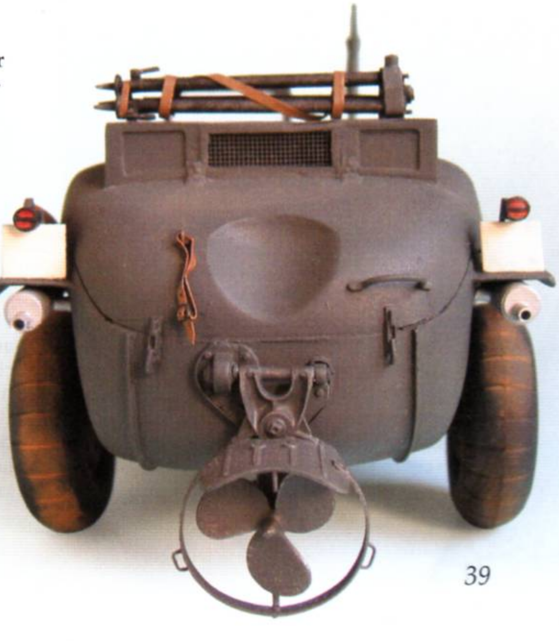
Compare this, the author's MPM 1:16 scale resin model of the production Schwimmwagen (VW166), to the 1661 prototype. Eduard's kit appears to have been based on this MPM model.



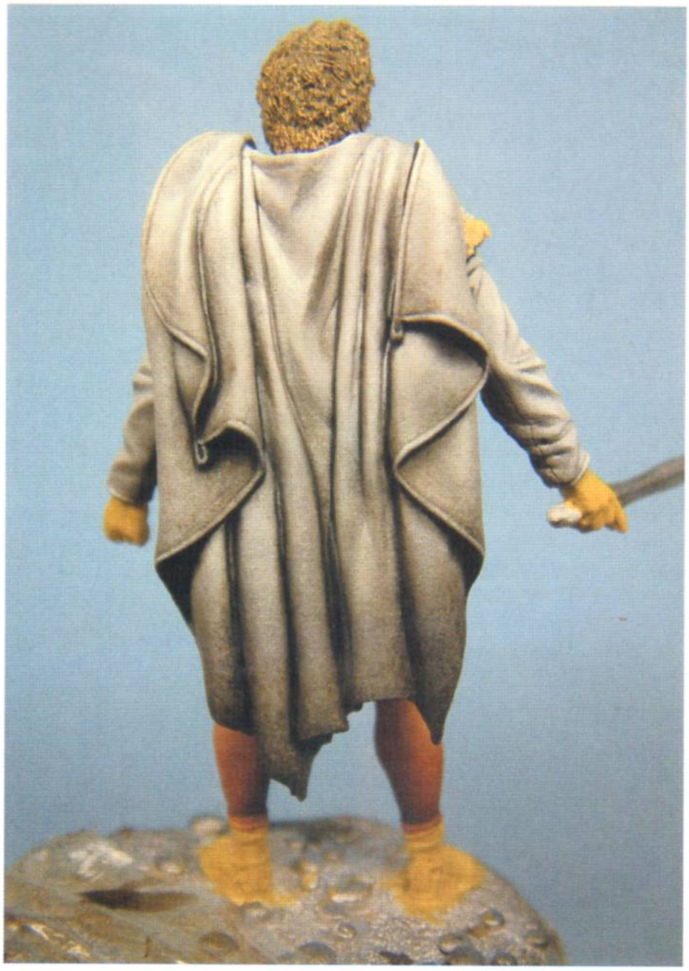


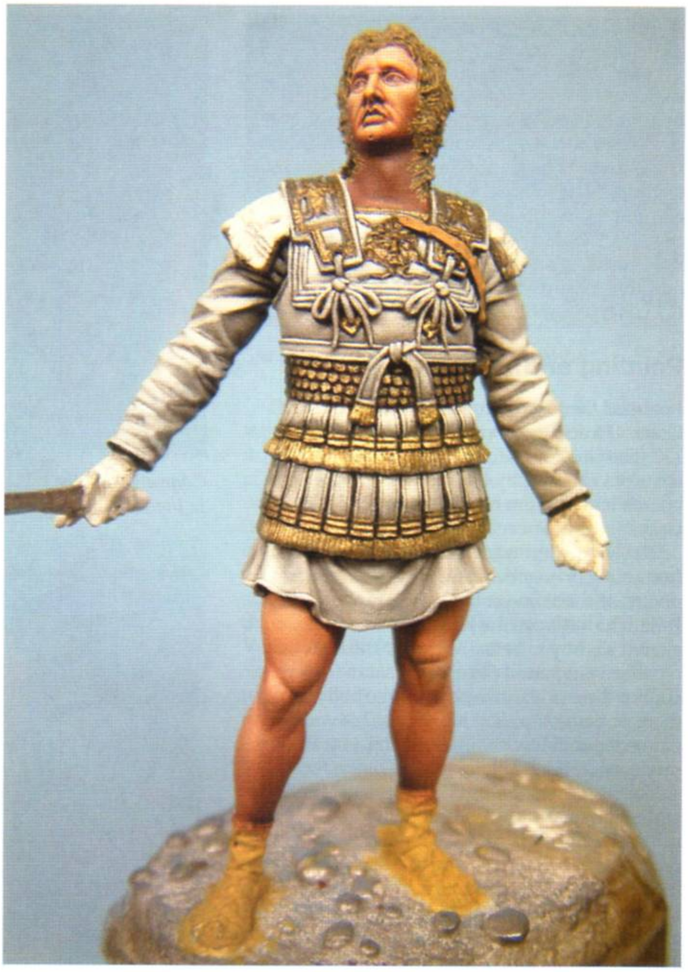
References

Volkswagen Militärfahrzeuge, Hans-Georg Mayer Stein, Published by Karl Muller Verlag ISBN 3-86070-861-9. Four photographs of 1661.
WWP No.19 Schwimmwagen in detail, ISBN 80-86416-12-7. (Good for details of interior.)
Military Miniatures in Review Special No.S1. *Modeler's Special Edition Guide to the Kübelwagen.* http://www.vw166.de
German Remote-Control Tank Units 1943-1945, Markus Jaugitz. ISBN: 0-7643-0185-3. (One photo of low-lying fuel filler cap.)
Eduard *Schwimmwagen* 1:16 scale kit from LSA Models, 151 Sackville Road, Hove, East Sussex BN3 3HD.
Tel: 01273 705420. www.lsamodels.co.uk ■



Next Issue! 'Schwimm Part Two' - Jay Laverty gives a different viewpoint on building Eduard's Schwimmwagen out of the box.

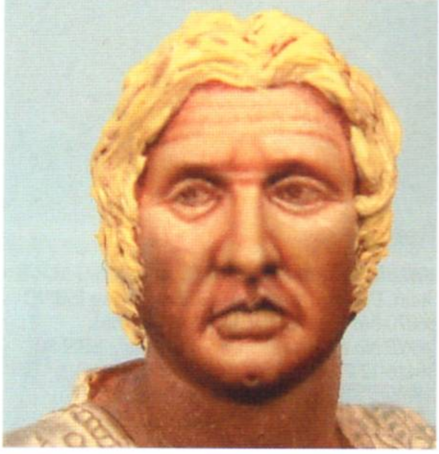




ABOVE LEFT: A little less dirt on the Alexander figure, but not much. Remember, he probably slept wrapped in that cloak! ABOVE RIGHT: Final highlights done. It's now time to reinforce the shadows under the arms with Lamp Black.

A Tale of Two Figures!

Hardy Tempest shows how to achieve realistic shades of white - possibly the most difficult colour encountered by painters of the miniature figure



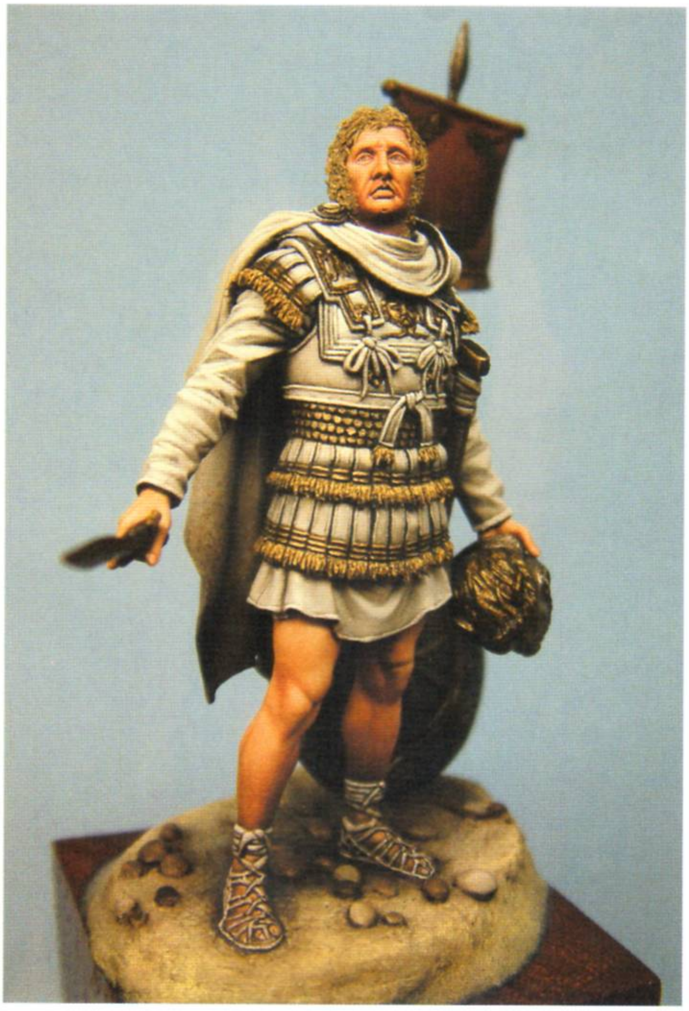
ABOVE LEFT: The kit head without the 80s 'mullet' I added later. ABOVE RIGHT: The extra hair I painted on the figure is visible here.

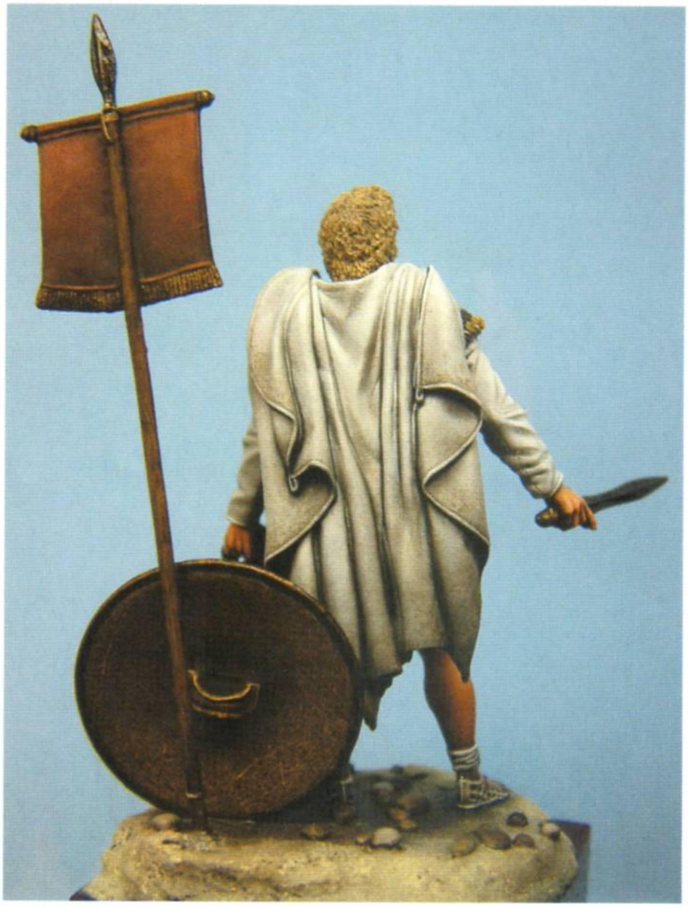
White seems to be one of those 'problematic' colours we painters become involved with. "How did you paint that?" I'm often asked. I will try in this article to explain my technique using two figures, both from Soldiers and both from the talented hands of Adriano Larrucia.

The first is Alexander the Great, the second a slight conversion on the Barbarossa figure. As is usual of this manufacturer both are exceptionally well-cast with very little flash to remove. The Barbarossa kit is definitely the less complicated of the two and comprises eight pieces whereas the Alexander kit comes in 12 pieces. Some parts are optional, such as the standard and groundwork.

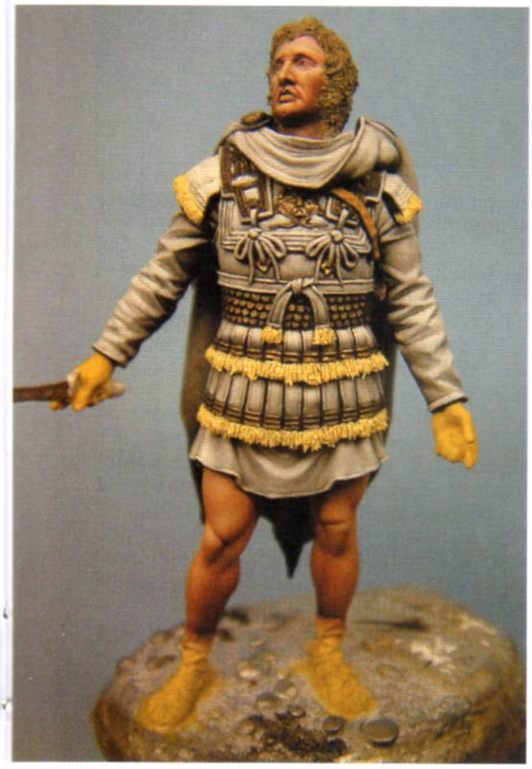
Barbarossa (in this case painted as a Templar) is quite an old kit and, if memory serves, was released during the 1990s, and although it's getting on a bit, stands up well when compared against newer kits. I chose to change the head on this figure for one from an EMI kit of Garibaldi which, I think, adds character to the figure and, of course, makes it that little bit different from the rest.

You will probably have noticed that I really do favour kits sculpted by Larrucia. Why? Larrucia seems to have a talent of making subjects that I have no apparent interest in, interesting. In my opinion he has no rival to his sculpting ability, his level of detail (especially faces) being exceptional and his anatomy superb whatever scale he chooses to sculpt in. This isn't a put down on the work of other sculptors, but Larrucia just seems to add something to his figures that personally appeals to me.





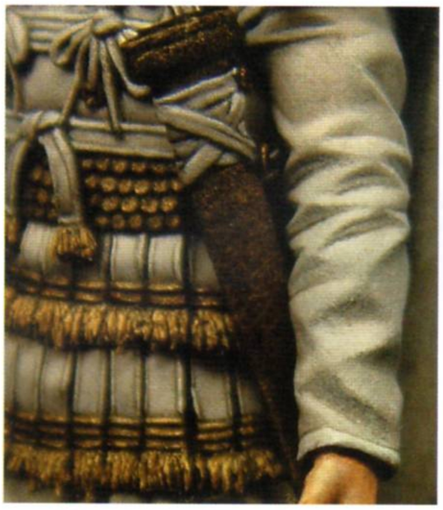
LEFT: Alexander finished! ABOVE: When it's finished the Alexander kit is a great addition to any collection of miniature figures. BELOW: This is what makes figure designers like Larrucia great - look at the exquisite detail on the shield.



Lamp Black shadows have been applied. The hair has been shaded with Burnt Umber and a Sepia wash.

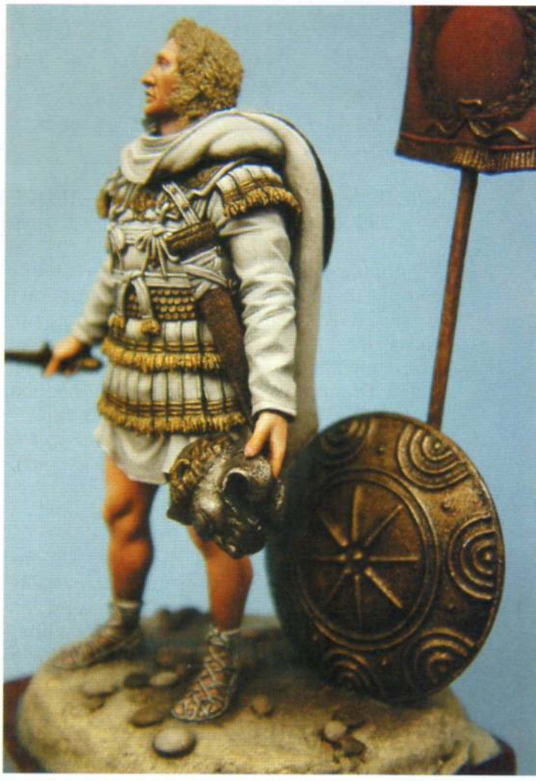
Artists' Oil Colours

A very important step in painting with oils is a good undercoat, which should be similar to your final highlight colour and offer a good adhesion to the oil paint. I choose to first prime miniature figures with several coats of Humbrol Matt White 34 enamel, then base coat the White areas with Andrea Flat White acrylic (6). Acrylic undercoats seem to soak up the oils better than Humbrol enamel and have the added bonus of drying quick. In areas of deepest shadows, such as the back of the cloak where no light falls, a Andrea Flat Black acrylic (26) undercoat was employed, this saves on any embarrassing unpainted areas showing from oblique angles and really gives the figure depth, which is half the battle when trying to bring these things to life.

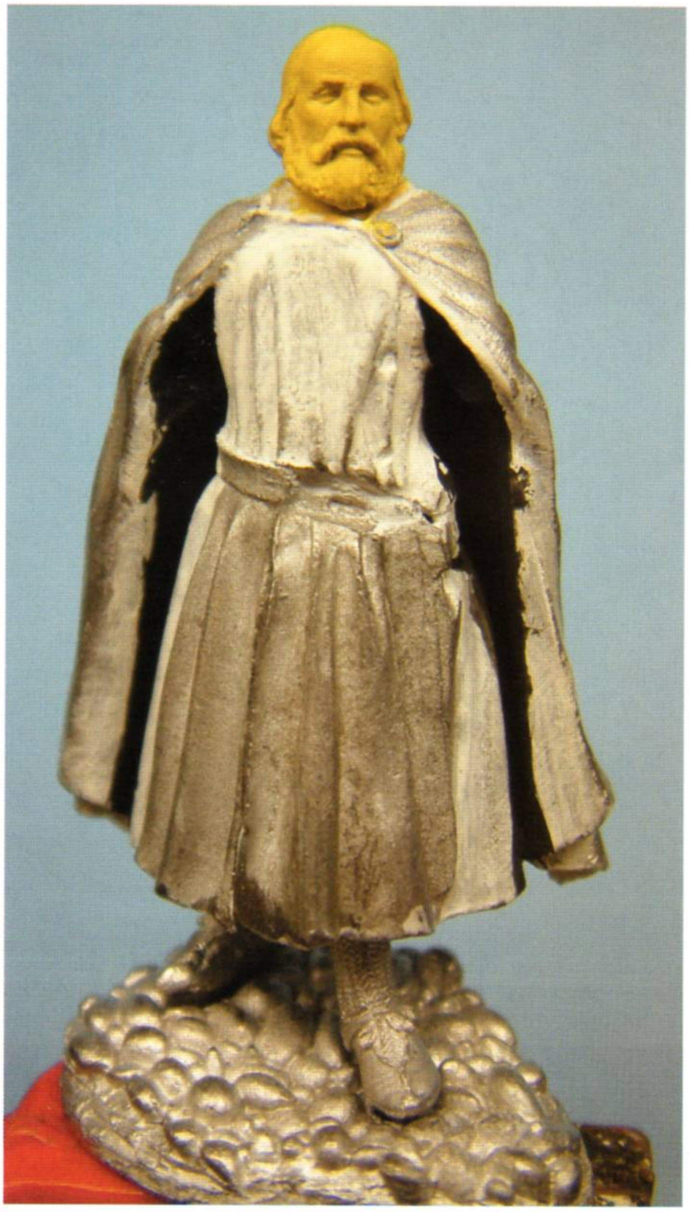


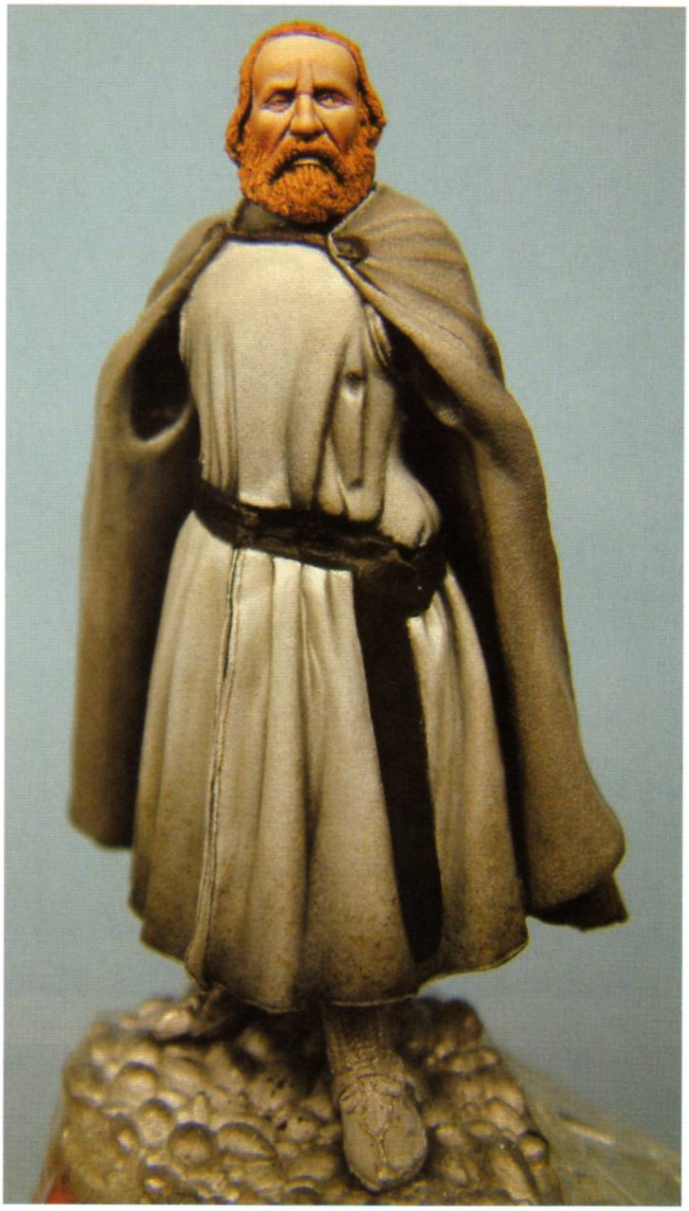
Depth is not created by light and shade, it is painted!

Using black to shade white is a personal preference; some painters love the contrast, some hate it. I feel it does have its place as a valuable tool painting light colours and, as you can see and will read, I use it quite liberally in my painting techniques, even flesh. But then again who ever said this has to be a formulaic hobby, make up your own minds and if you like learn, adapt and then innovate. Emulate?



The oil paint base coat consisted of a mix of 80% Sepia + 20% artists' grade turpentine, which should give a mix the consistency of cooking oil. After leaving it on the figure for

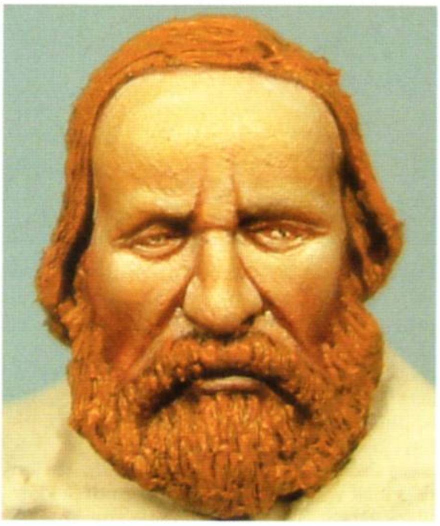




ABOVE LEFT: Pre-shading in progress. ABOVE RIGHT: The belt area has been pre-shaded with Lamp Black so that when I paint the rest of the belt a slither of black will be left. BELOW: The face almost complete apart from the eyes. The beard and hair will be shaded when dry.

20 minutes, I used a chisel-pointed brush to remove the excess paint. A stippling motion was used, which has the effect of evening up the surface, leaving a uniform look and removing all brush marks from the coat of oil paint. Titanium White, straight from the tube, was used to paint in all the highlights and mid-tones leaving an amalgam of the Sepia + Titanium White (giving a warm grey colour), with Sepia in the medium shadows and around the base of the white clothing, and the black acrylic painted at the undercoat stage in the darkest areas. This is my wet-on-wet technique. I left the figure for at least 24 hours to give the oils a chance to dry and give the second highlight of Titanium White enough adhesion to 'stick' without creating a second amalgam with the first highlight. This is a wet-on-dry technique.

You should now be getting somewhere towards a 'white colour', with any gradation between light and dark looking more progressive. Pure Titanium White for the extreme highlights, gradating down to pure black for the deepest shadows. I normally tie all this together by repainting further highlights and shadows until I get the desired contrast. Painting a hem on the outer edges of clothes can really reinforce this look; pure Titanium White for the high edges, warm Grey for the lowest. Sepia for the recesses of the hem line at the top, Lamp Black for the lower recesses or hem lines beneath the arms.



Weathering the white painted areas was done by washes and stains of Sepia and Burnt Umber oil paint. You can also cheat a little and help reinforce your shading with any weathering effects, which adds a dynamic look to the white. You can see this best at the base of the Templar's cloak, in a semi-clean environment it probably would not have been so dark, but with the effects of being dragged through the wet mud of a medieval battlefield the cloak would most likely have become almost 'two-tone'.

To recreate different tones of white, such as with Napoleonic uniforms, just add a little Ochre to the Sepia and also to the highlight mix.

Face and Flesh Mix

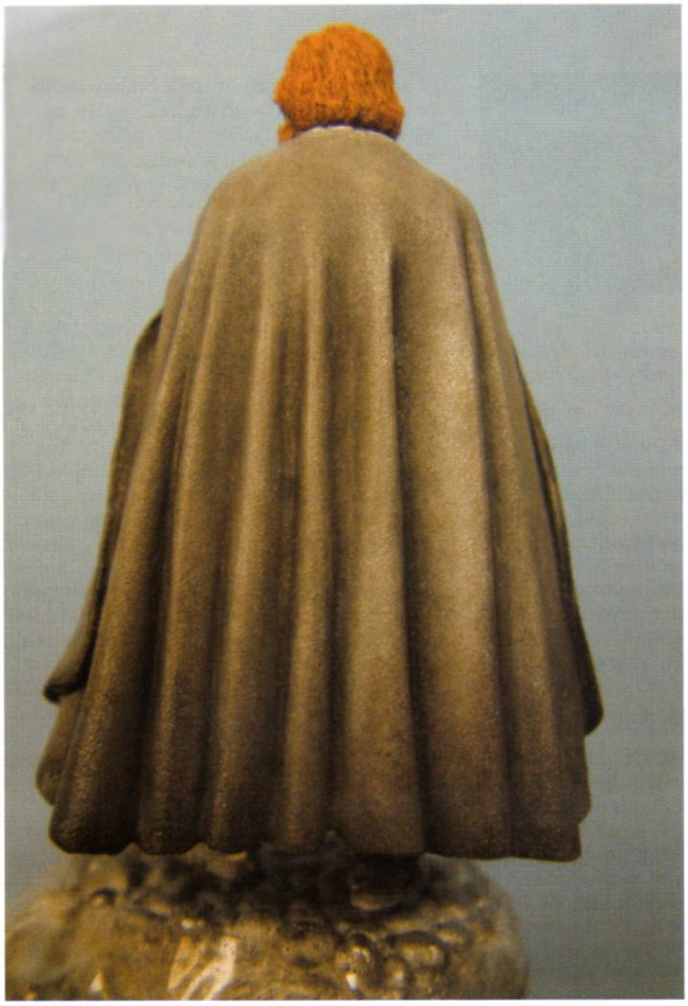
Undercoat: (Acrylic) Yellow Ochre + Yellow.
Base coat: (Oils) Equal amounts of Venetian Red + Cadmium Yellow + Ochre.
First Highlight: (Oils) Base coat + Naples Yellow + Titanium White.
First Shadow: (Oils) Venetian Red.
Second Highlight: (Oils) First highlight + Titanium White.
Final Highlight: (Oils) Titanium White (use very sparingly).
Second Shadow: (Oils) Venetian Red + Lamp Black.
Deepest Shadow: (Oils) Lamp Black.

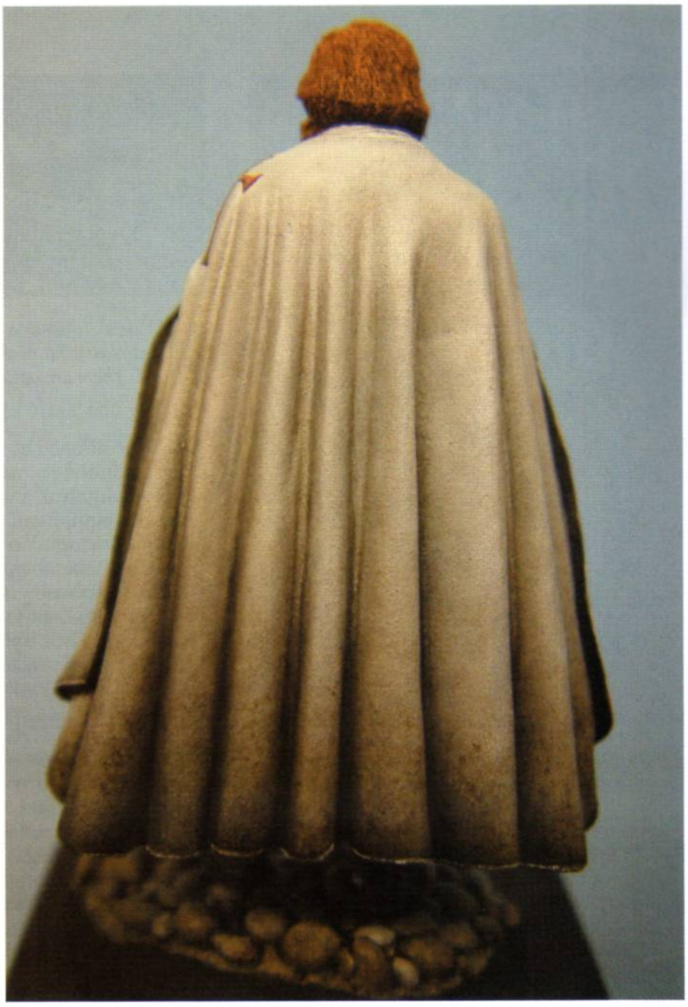
Beard and Hair

Base coat: (Oils) Naples Yellow (Add a little ochre and Venetian red for the Templar).
Shadow: (Oils) Sepia.
Highlight: (Oils) Naples Yellow.

Leather Armour

Undercoat: (Acrylic) 50/50 mix of Yellow + Ochre.



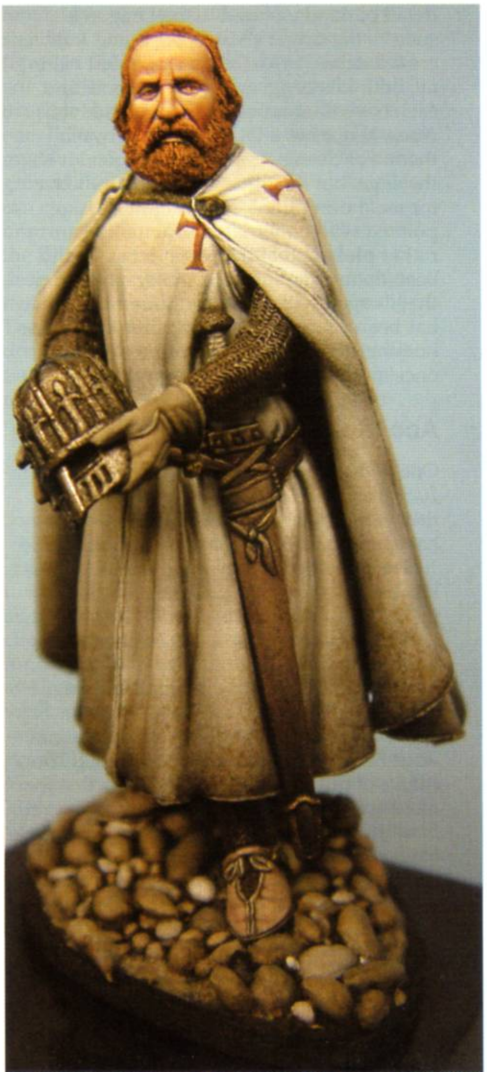


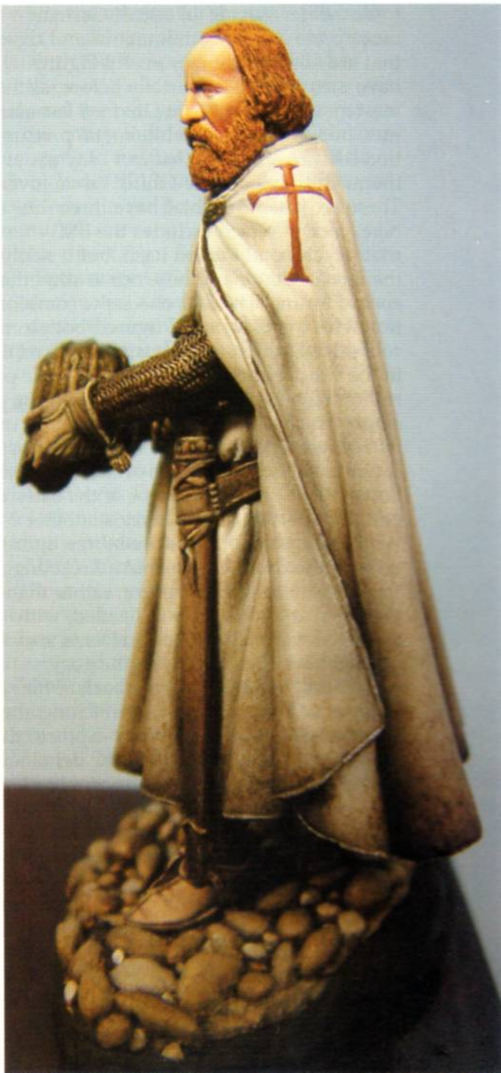
ABOVE LEFT: This is the colour you should get with a Sepia and Titanium White mix. Wait a day and then repeat the highlighting. ABOVE RIGHT: The cloak on the Templar is longer and has picked up more dirt. BELOW LEFT: The Templar figure finished and the replacement head makes an interesting change to a classic figure. BELOW RIGHT: This figure must be 10 years old! Still great though.

Base coat: Lamp Black + Venetian Red.
Highlight: Naples Yellow.
Shadow: Lamp Black.
The Cross
Undercoat: (Acrylic) Red.
Base coat: (Oils) Venetian Red + Cadmium Red.
Highlight: (Oils) Naples Yellow.
Bronze Armour
Undercoat: (Acrylic) Gold.
Base coat: (Oils) Sepia.
First Highlight: (Oils) Gold Printers Ink + Sap Green.
First Shadow: (Oils) Sepia.
Final Highlight: (Oils) Gold.
Second Shadow: (Oils) Lamp Black.
Metal area's
Undercoat: None.
Base coat: (Oils) Sepia.
First Highlight: (Oils) Silver Acrylic.
First Shadow: (Oils) Lamp Black.

Availability

Soldiers' figure kits and Andrea acrylics are available from Historex Agents of Dover who advertise every month in ***Military Modelling***. Historex Agents, Wellington House, 157 Snargate Street, Dover, Kent CT17 9BZ.
Tel: 01304 206720. Fax: 01304 204528.
sales@historex-agents.co.uk
www.historexagents.com
All oil paints and thinners used were Daler-Rowney and are available from all good art suppliers. More of my work can be seen on my Website:
www.hardytempest.moonfruit.com ■

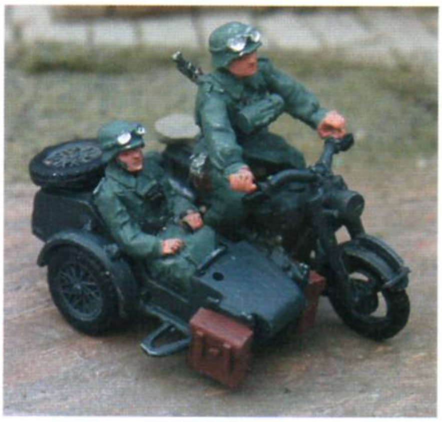




SMALL SCALE SCENE

A monthly column for military vehicle modellers compiled by ROBIN BUCKLAND

- **E-mail:** robin@rbuckland.freeserve.co.uk
- **Website:** www. rbuckland.freeserve.co.uk

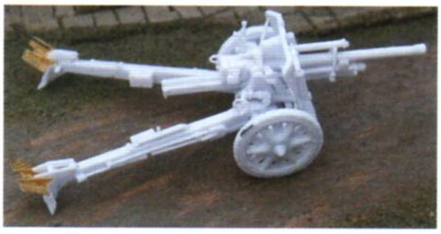


AB Figures' white metal 1:76 scale German motorcycle combination - one of three variants.

Maybe it is something to do with the longer winter evenings which encourage you to settle down in the comfort of home and settle down to some modelling, but I have to say I've enjoyed doing a bit of catching up recently. In particular I want to enthuse about a few recent products which have really attracted my attention.

AB Figures

First new items to mention this month have to be the new sets of 1:76 scale German motorcycle sidecar combinations and crew that are now available from AB Figures. I have mentioned them briefly before, as the masters were on show at Duxford last summer, but now the cast white metal production sets are on sale. What can I say about them? In simple terms, I think I'm in love. These are just a delight. I have three sets here, each of which includes the BMW motorcycle combination itself, but it really is the figures that mark these out as something special for me. The first one is the combination with two *Wehrmacht* figures, both in the rubberized motorcycle coats, one tucked up in the sidecar and the bike rider in basic pose riding the bike, gas mask container slung across his chest, and goggles pushed up onto his helmet, rifle slung over his back. It just captures that classic image of these combinations seen in so many photos of the early war period in particular. The next is another *Wehrmacht* team, but this time three figures to go with the combination, and all relaxing. All three are in standard uniform, rather than the big coats, and two are bare-headed, with their sleeves rolled up. The driver is standing, helmet still on and with the goggles pushed up, but hands on the back of his waist as he leans backward, stretching after a long period on the road. It just captures the whole mood of the scene and the detail and character in the figures is just stunning I think. Then there is the third, which has three figures to go with the bike again, but this time all *Fallschirmjäger.* Distinctive helmets and tunics identify the unit, and the chap in the sidecar plus two guys on the bike itself. All are positioned as the bike is moving. Once again the animation of the figures is simply delightful, and all the detail for uniform and equipment that you could want is all there. My opinion I grant you, but if you don't like these, then I don't know what it will take to please you. AB Figures are at Ffos Yr Ewig, Llanfynydd, Carmarthen, Wales SA32 7DD. Tel: 01558 668771 or check their Website www.abfigures.co.uk



Ace Models' 1:72 scale limited run, injection moulded plastic kit of the German 10.5cm le.FH 18/19M. There are optional photo etched brass parts included.

Nashorn! Revell v Dragon

Following close on after the Dragon kits, Revell have also now released their 1:72 scale German *SdKfz 164 8.8cm* SP gun *Nashorn.* I found it went together well, and isn't a difficult kit to construct. For my personal preference it scores for having the running gear with the link and length style track that Revell have mastered I think. The Dragon kit suffers from the single piece tracks that they go for, and in this case it is a touch short, and 'stretches' around the running gear. It works, but I much prefer the Revell option in this area. Within the fighting compartment there is not too much in it, though there is a bit extra fine detail within the Dragon kit. Equally, there are a greater number of small detail parts to be fitted to the Dragon kit, such as the driver's vision ports and hull crew hatches, as just some examples. All in all, both kits are generally very good, and each have their advantages and disadvantages, hence not a lot to choose between them. For details, I think the Dragon kit has the edge, but the Revell track works better for me. I don't think we should be disappointed with either kit, and actually I am rather pleased that the *Nashorn* has finally been done as an injection moulded kit and that Dragon will follow with the *Hummel.* It has been a long time coming, but likes buses, nothing for ages then two come along at once! Both are in the shops now.

Ace Models

One of the kits I've put together recently is the *10.5cm le.FH 18/18M* from Ace Models. After their series of modern Soviet equipment, they have turned to WW2 subjects for the range of 1:72 scale limited run injection moulded plastic kits and, in particular, to German artillery pieces. The 105 can be built with the trails in either the towed or deployed positions and there is a fair bit of cleaning up to do on the parts, and with many quite small and fragile pieces involved, you do have to take care. However, once that is done it assembles into what I think is a really neat little model. The nature of these limited run kits mean that the moulding does not have the crispness we get from the likes of Revell or Italeri, but still these are fine for any modeller with a bit of experience, but I don't think I'd really recommend them for a beginner. There are optional styles of gun muzzle, with a muzzle brake or without. Also, a choice with the trail spades, as plastic parts are supplied, as is an optional choice of etched brass for the upper section, which is perforated. My personal choice was to remove almost all parts from the sprues and clean them up first. This only needs a craft knife and a pin vice to drill out some holes, then a basic assembly job. Exact location of the parts on the trail arms is not perfect, but you'll get close enough. The assembly drawings are good and also easy to follow. Detail is generally fine, but just a little soft in places. I particularly liked the way the tread pattern on the wheels has come out. Thanks to Pol Models at 64 Cumberland Road, London W3 6EY. Tel: 020 8992 3822, who provided my example. I just wonder what will come along next.

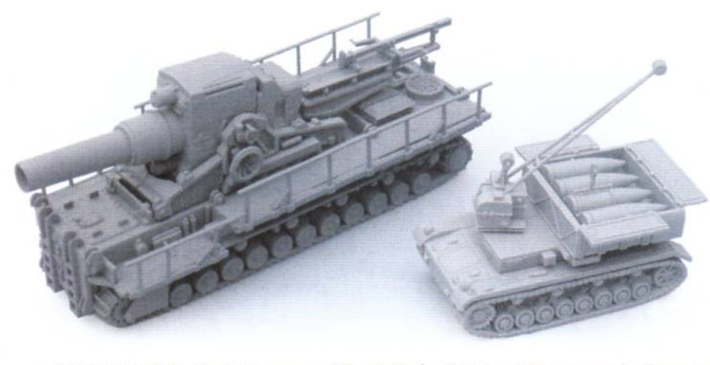
BK Modelcraft

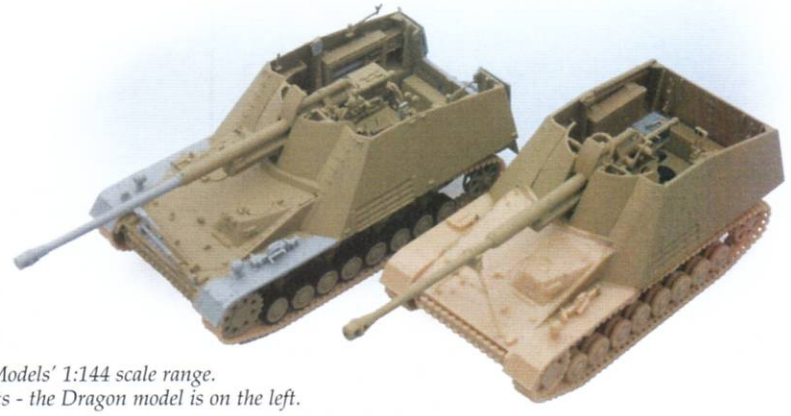
Time to mention briefly, a small and simple little conversion from BK Modelcraft. There is just a single resin piece to the conversion, which is the soft top style cab for the Diamond 'T' tank transporter. If you can get hold of the old Matchbox kit of the Diamond 'T' then this is a very straightforward replacement part for the hard top version featured in the kit. It is neatly cast in polyurethane resin and is made to fit in with the kit. BK Modelcraft are available from 34 Main Street, Newbold on Avon, Rugby, Warwickshire CV21 1HW.

Dragon Models Ltd

In their 1:72 scale range, Dragon continue to release variants of the HMMV, supplied two in a box, and I have to say I rather like these. One point to make has to be how Dragon add points to each one as it's released. Different from their first 'Hummvee', they now have the additional parts in etched brass for the folding shields to go on the rear body, and the large rear hatch is now a separate part which can be fitted open or closed. That alone is a good point for me. The provision of the extra armour (ASK) kits used in Iraq shows how up to date they are staying. I remain a bit unhappy with the wheels, as the tyres are a bit of a pig to get on to the hubs, and the stub axles they fit to are a not particularly strong joint. Another point I really like is their use of clear plastic for the upper body section and doors. This means the glazing is done for you, and simply not a problem. It is the one point in particular where it scores over the Revell Hummer, which leaves you to source, cut and fit clear plastic glazing. (I remember when I first saw the JB Models kit which did the same thing with the cab on their Bedford MK.) It's a technique that has been used before, but it really does work well with the HMMV. As I am very much a fan of the vehicle, I look forward to future variant releases to come from Dragon. With two 1:72 scale models per box, that is also good value for money these days. Thanks to the Hobby Company for my example, who are the UK importers.

Another two releases from Dragon, but in the smaller scale of 1:144 scale, are the *PzKpfw IV Munitionspanzer* and the huge railway carriers that were used for moving the *Karl* Mortar (already released in a couple of variations) over any long distances. The great advantage of the smaller size makes subjects like this a reality for anyone with limited storage space. Moulded in the soft grey plastic Dragon use for this series, they have also made a change to the *Karl* itself. The *Karl*



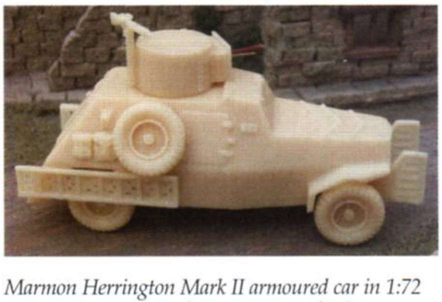


ABOVE LEFT: Karl Mortar and its PzKpfw IV Munitionpanzer in Dragon Models' 1:144 scale range.
ABOVE RIGHT: Comparison of Dragon's and Revell's 1:72 scale Nashorn kits - the Dragon model is on the left.

Mortar was had limited mobility on a set of running gear over short distances. For firing, however, it could lower the suspension so the hull sat on the ground to provide a stable firing platform. Both positions of running gear are provided in the kit, but that for the track on the running gear in the firing position is a separate band to be fitted, rather than cast as a single piece as it was originally. The little *PzKpfw IV Munitionpanzer* has a load of four shells, one of which is fitted to the hoist and needs a little thread to fit up and around the small crane. The plastic is quite soft, and there are not a huge number of parts, so assembly is straightforward. Remember to check that stubs where the parts are removed from the moulding sprues are carefully cleaned up, as this can interfere with the fit. I'm getting quite taken by these smaller scale AFV models now that the range is increasing in size and appeal. They should be in the shops now.

Art Toys

This month I can mention the first of a couple of new releases from Art Toys, in Belgium - a cast resin model in 1:72 scale of the Marmon Herrington Mark II armoured car. There isn't a huge number of parts to it, but I do like the inclusion of a number of packs which are personal crew stowage to fit on the side. The quality of the castings was good, the only two air bubble blemishes I found were on the headlights, moulded in front of the radiator. Some will be disappointed that the turret is cast with the hatches moulded shut which makes it difficult to add a commander figure without some major work on it. The instructions are in the form of an exploded assembly diagram, but I guess it is copied from a larger scale kit just because it indicates a separate chassis which is actually moulded integral to the body. The same is true for one or two other parts which are moulded in place. However, nothing that can't be worked out. If you haven't tried the range from Art Toys yet then I'd happily suggest you do, as they have unusual subjects in the series. Available from Art Toys, Ouden Dendermondse, STWG.49, B-9300 Aalst, Belgium.



Marmon Herrington Mark II armoured car in 1:72 scale - a cast resin kit from Art Toys of Belgium.

Forces of Valor

Along with the ready-made and painted 1:72 scale range of vehicles from Forces of Valor, in recent months I have also seen their four sets of 1:72 scale figures. These are stoutly packed in a display box and there are WW2 German *Panzergrenadiers*, British 6th Airborne Paras and some US 7th Infantry Division GIs, whereas for the modern period, there is the US 4th Infantry Division in Baghdad, 2003. Each set also includes a few accessory and diorama pieces, such as jerrycans, oil drums, signpost, etc. The figures, I think, are nicely animated, but the small arms they carry are all rather 'dumpy' and not brilliant on detail. he quality of painting can be bettered by many modellers, but actually I'd rate them as 'not bad'. As I've said before, the availability of models like this helps both younger and older modellers alike, as it means you can put some figures alongside your model vehicles if your confidence in your own figure painting skill on figures is not what you would wish. Some of the poses in each of the sets are rather nice, and although this doesn't mean there is anything wrong with the remainder, just what I'd think of as fairly standard. One I particularly like is the double figure in the modern US Infantry set, where one soldier is carrying his wounded buddy over his shoulders. If I'm allowed to have one, I'd say the modern US figures in Iraq are my favourite and all are very good for background figures in dioramas, and a modeller can choose to repaint them if they want to improve things. The camouflage jackets on the British Paras, as well as the modern US desert camos, work quite well. Not many figures in the sets, but still quite reasonable. The little accessories, like sign-posts, oil drums, beach obstacles, sandbags or rubble are useful little touches. My thanks to the manufacturers for my examples; they are now available in the UK.

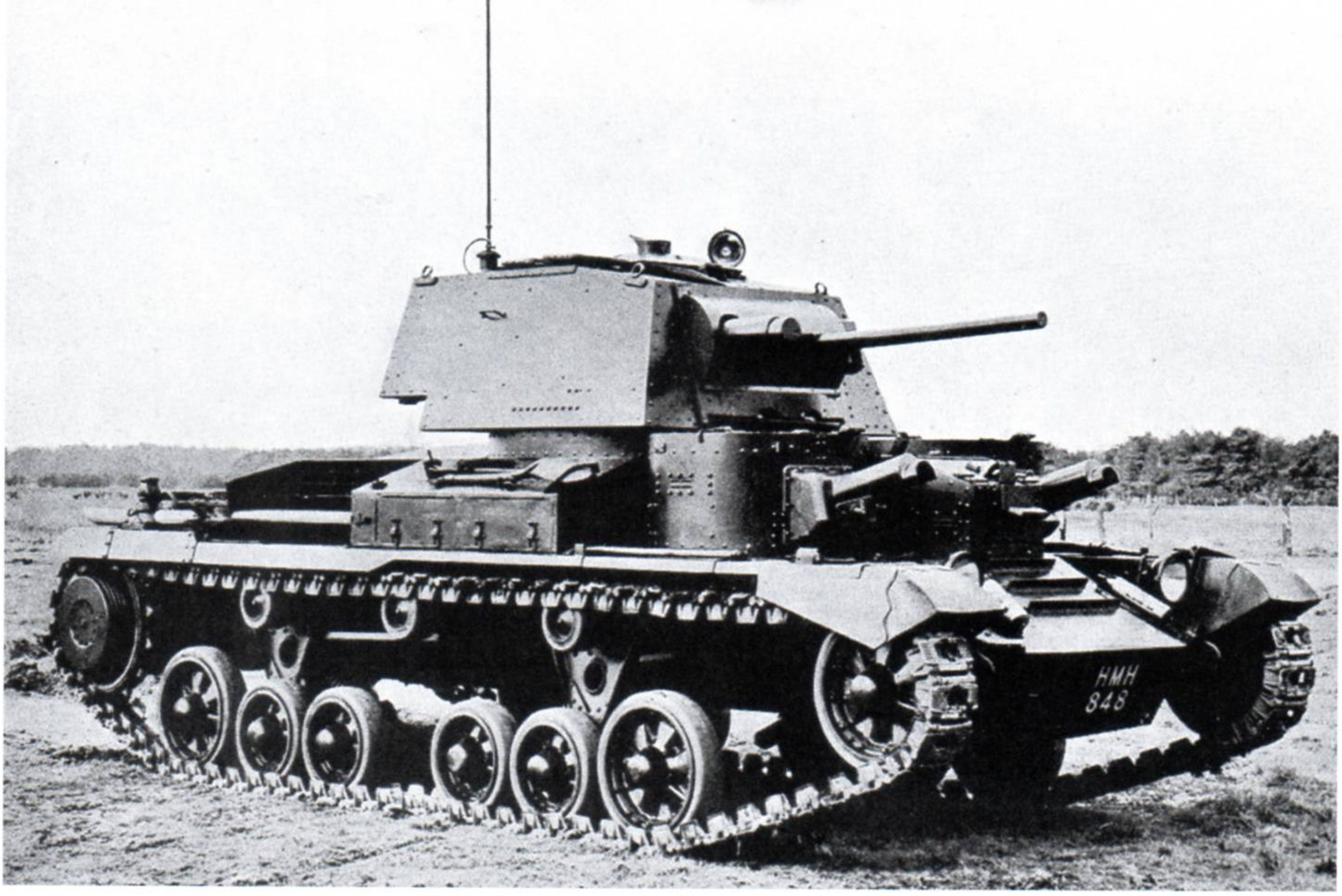
Transfer List

Some more new releases have come through from Bison Decals, in Sweden, all in 1:35 scale and there are no less than six new sets to bring you up to date on. The first three are all for what might be described as the modellers' favourite tank, the Tiger I. The first is for *s.Pz-Abt 503* during the Kursk operation, and has markings for five complete Tigers. With subjects all in the same unit during the same time period, this offers some interesting possibilities for a diorama or for just a collector. Every one is for an early production style Tiger, and all the colours are just black and white, so it will be the camo schemes on the tanks that provide the colour. Instructions are provided for each tank, including placement of the transfers. The second, and similar, set is for the units of *s.PzAbt 507, 510* and *Grossdeutschland*. This one covers late model Tigers, and has enough for seven complete models. The style of numbering is quite different, so it will make for a distinctive end result. The third set has enough for eight complete vehicles, of *s.SS PzKp LAH/PzKp Meyer* and *PzAbt Kummersdorf*. Once again, all are for early production vehicles and all the markings are in black and white. However, with the different units, this offers the greatest variation in the different individual camouflage schemes.

The remaining three sets are much more colourful. The first is a modern set, covering British Army Warriors in the Balkans. Enough here for three complete vehicles, but with the large white IFOR lettering, the yellow and red warning chevrons, little union flags and so on, these are all intended for green/black camouflaged machines. These sets are silk-screen printed for Bison by Microscale Decals in the US, who have a longstanding reputation for a good quality product. The last two are for Allied WW2 subjects. One is for 'swimming' and 'wading' Shermans (markings for five complete models), while the other is for the LVT-4 Buffalo (enough for six complete models). For those of you with the Resicast Sherman DD kits, then I think this is ideal. Beautifully produced, and the red, yellow and red markings make this much more colourful. Similar comments apply to the final set, for the Buffalo, which includes SEVENOAKS, the Buffalo to be seen today in the Bovington Tank Museum. All are very neatly produced. Available direct from Bison Decals, c/o Johan Lexell, Ryttarvagen 25, 15159 Sodertalje, Sweden. You can e-mail them at bison_decals@hotmail.com or their Website at http://www.angelfire.com/pro/bison

Publications

The latest issue in the 'Trackstory' series of books from the publishers of *Minitracks* magazine is number 4. This one covers the Renault R35 & R40 in its various forms and like their magazine is produced in a dual language format, of English and French. Well-illustrated throughout with photos, there is the development and service history of these machines, including the later service in German hands. What captured my attention in particular were the photos of some more unusual variants, like a fascine carrier and mine rollers in a couple of different styles and most unusual as a mine exploder is a 'tumbling weights' device. All offer some interesting conversion potential for any model and not too surpassing that French AFVs are being covering so far, but this is turning into a very neat little series of books. Available direct from Editions du Barbotin, 25 rue des Jardins, 91160 Ballainvilliers, France. ■



First A9 off the line! Vickers' built A9 Cruiser Mark I production tank, HMH 848 (later WD No. T 3492) in factory fresh condition. (Private Collection.)

British Cruiser Tanks

The first of the type was the Vickers' A9 Mark I which played a significant part in the battles in France and North Africa as Peter Brown relates

A9 was the first of the British Cruiser tanks. Developed at a slow pace by Vickers, building work on the prototype began in the third quarter of 1935 and following trials and modifications it was accepted for service in June 1937.

It was of conventional layout, its six-cylinder AEC Type 179, 150hp petrol engine, gearbox with five forward and one reverse gear and transmission were at the rear driving the tracks through rear-mounted sprockets. Suspension was the 'slow motion' type where the two three-wheeled bogies per side had one large and two smaller wheels with large, almost horizontal springs and shock absorbers. Its three-man turret was rectangular and just ahead of centre. Most A9 tanks carried the then-standard two-pounder gun, with some mounting the 3.7in howitzer as 'Close Support' or CS tanks. All had a .303in water-cooled Vickers machine gun in a coaxial mounting and the turret was balanced by a No.9 radio set at the back. Turret traverse was hydraulic and the A9 was the first British tank to use this system, though there was a manual backup.

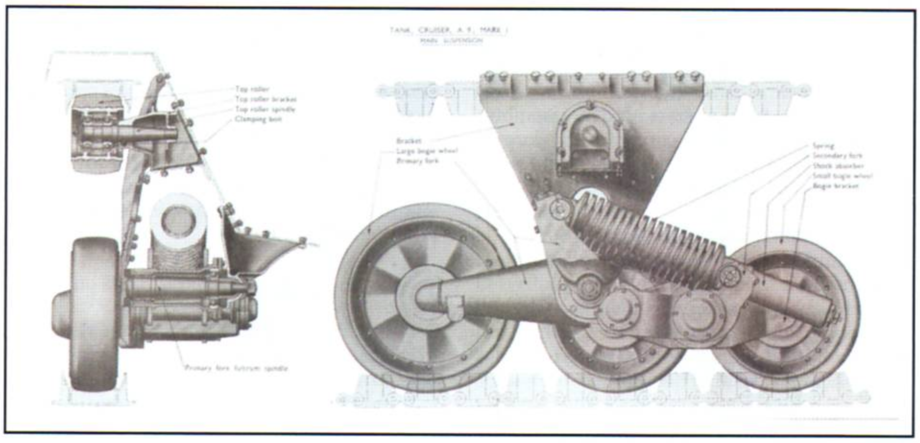
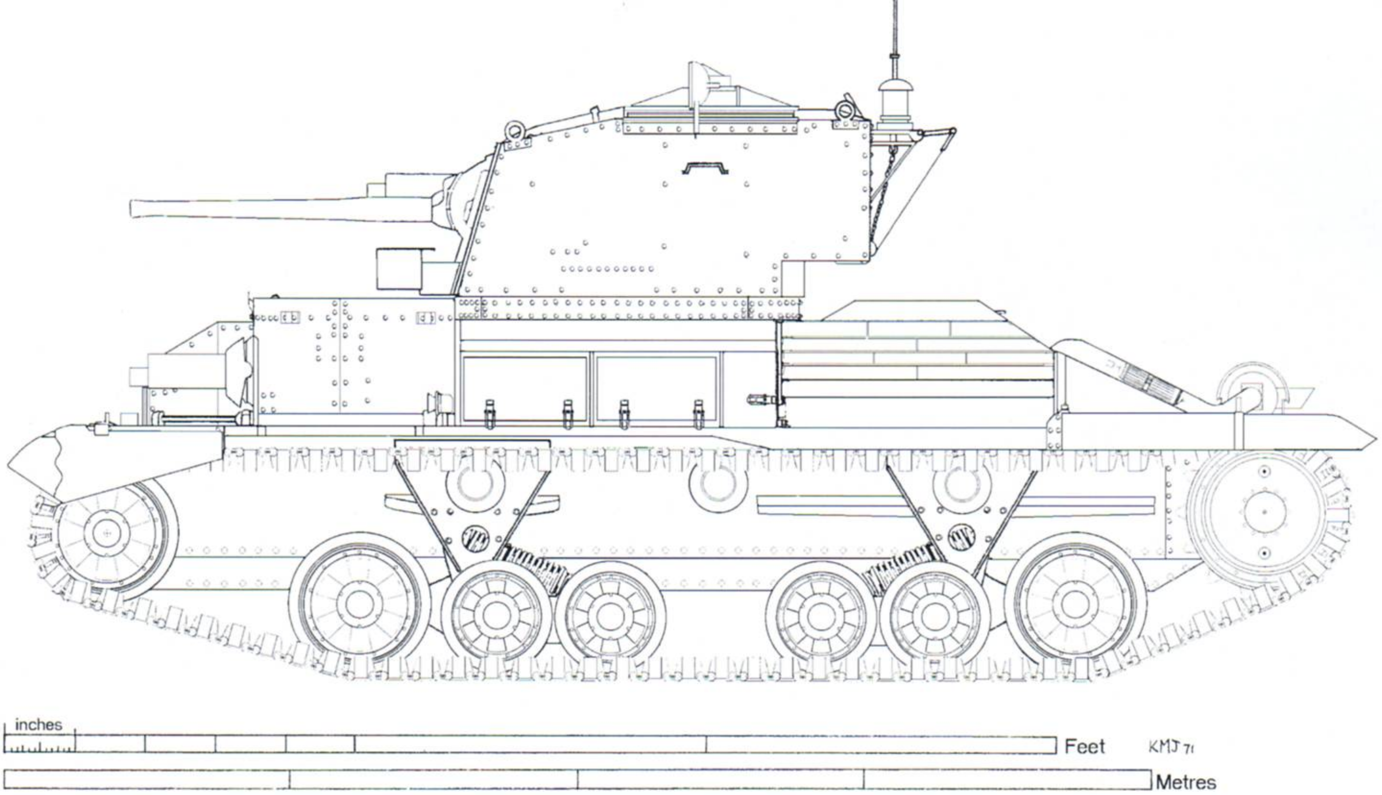


Illustration from the official handbook on the A9 and A10 Cruiser Marks I & II showing the Vickers' designed 'slow motion' suspension system fitted to the A9 and A10 cruisers - and subsequently the Valentine range of infantry tanks and SP guns.

Unusually there were three crew members in the hull. The driver sat in the centre in a small raised 'cab' set forward, on either side of which were small, one-man turrets, each mounting a Vickers .303in water-cooled machine gun. Fully stowed and with all crew in place the A9 weighed around 12.5 tons and could manage 25mph on suitable ground. Armour was 14mm maximum with only 6mm in less vulnerable areas. Although it may look old-fashioned to our eyes, its hydraulic traverse was a novel feature at the time and it was also gas-proofed.

In August 1937, 50 vehicles were ordered from Vickers with serials T3492 to T3542 and civil registration number plates HMH848 to HMH897. The first vehicles were completed at the Elswick factory in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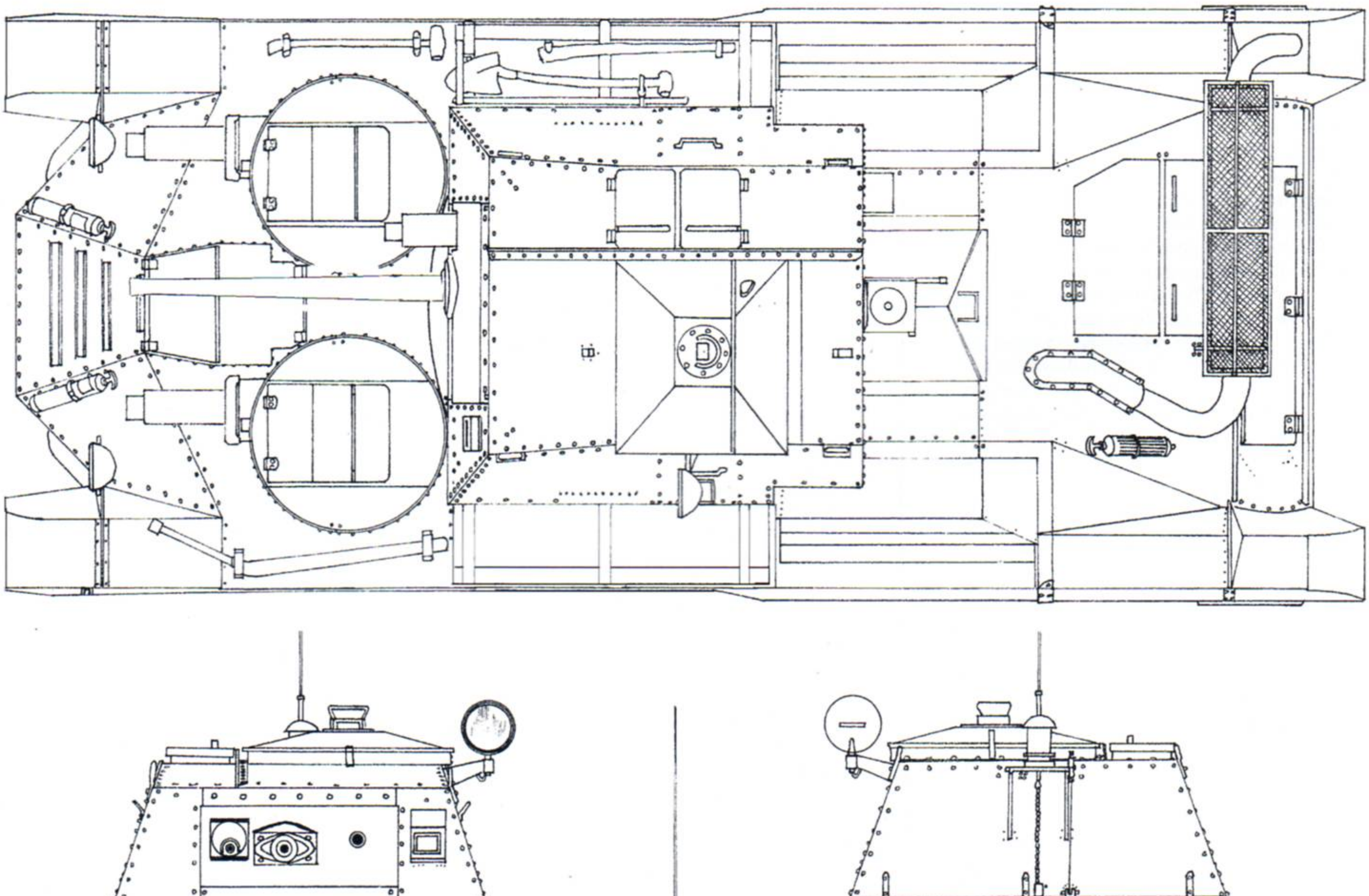
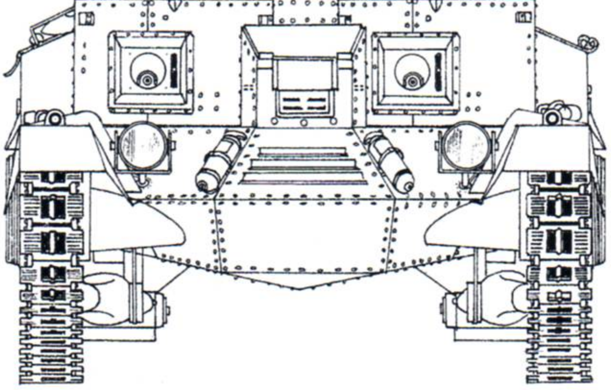
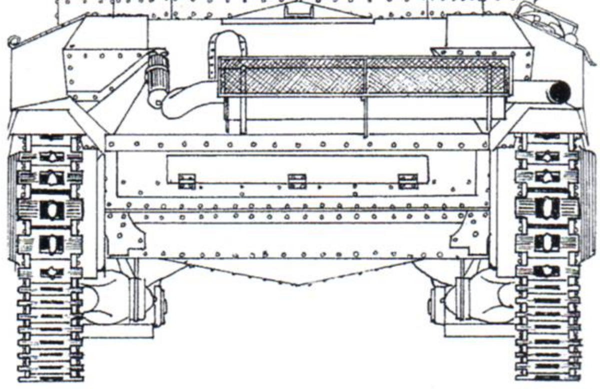
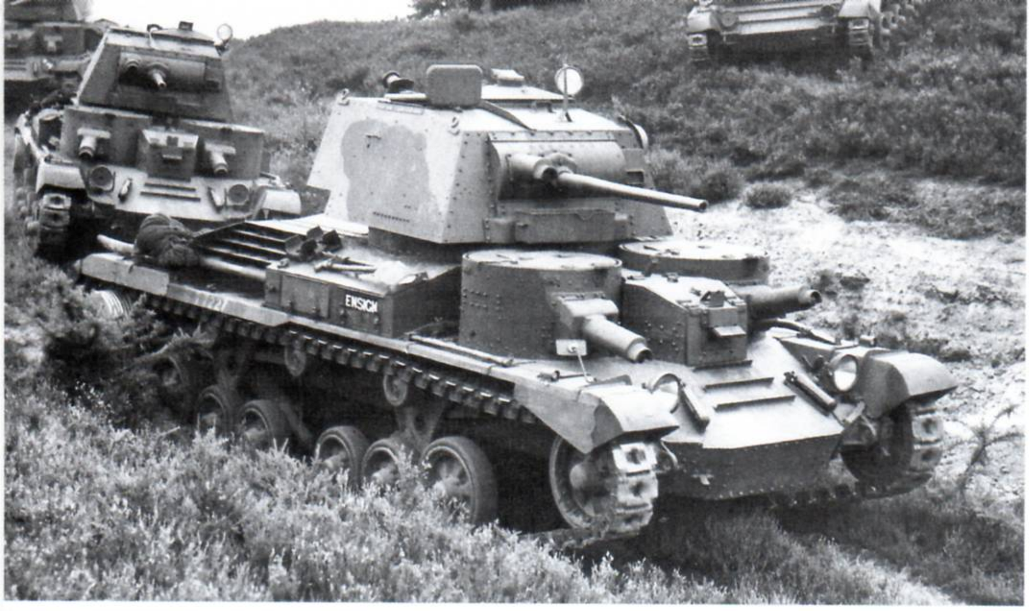








A9s and A10s of 3rd Armoured Brigade, 1st Armoured Division on exercise in the UK in 1940. The nearest vehicle T 7227 ENSIGN belongs to 5RTR, then the junior regiment within the Brigade. (Crown Copyright.)

January 1939 with the last two delivered in February 1940. Another order for 75 tanks, 39 with 2pdr guns and the rest with 3.7in guns, was placed with Harland & Wolff in Belfast. These were allotted serials T7196-T7270 and registrations PMV552-PMV626 though civil registrations were not used after T7216/PMV572. The first tank from this batch was tested in Belfast in June 1939 and when the last one was delivered in July 1940 a total of 125 plus the one-off prototype were produced.

The very similar A10 used the same engine, mechanical components and suspension, but had armour up to 30mm thick. It was shorter and did not have the small machine gun turrets, instead it had a flat front with driver on the left with a 7.92mm Besa machine gun on the right. The two tanks were close enough in design for a combined user handbook to be produced which covered both. A total of 170 A10 with 2pdr or 3.7in guns were produced. A9 was termed 'Light Cruiser' and A10 'Heavy Cruiser' and the two often served alongside each other.

Into Service, into France

The War Establishment of a British Armoured Division in May 1939 called for one Light Armoured Brigade whose three Regiments each had 36 Light Tanks and 22 Light Cruisers, and a Heavy Armoured Brigade of three Regiments with 26 Light Cruisers, six CS Cruisers and 15 Heavy Cruisers each. With 159 Light Cruisers and 24 CS Cruisers out of a total strength of 349 and only 125 A9 ordered, there were not enough to fully equip even one Division with just one type. At the outbreak of war in September 1939 when three armoured divisions were planned, the number of modern tanks on hand was 834 Light Tank Marks VI, VIA and VIB, 35 Cruiser A9 plus 42 A13 Cruisers with suspension based on the American Christie design.

A revised Establishment introduced in March 1940 replaced the Light and Heavy Armoured Brigades with two similar Armoured Brigades, each with three Regiments operating 52 Cruisers. However the armoured units of the home-based 1st Armoured Division - 2nd Armoured Brigade with The Queen's Bays (2nd Dragoon Guards), 9th Queen's Royal Lancers and 10th Royal Hussars (Prince of Wales's Own) with 3rd Armoured Brigade composed of three RTR Battalions, 2nd, 3rd and 5th - still had Light Tanks as well as A9, A10 and A13 Cruisers. By the time it was committed to France its strength was 134 Light Tanks and 150 Cruisers as well as Dingo Scout Cars, though many tanks were short of radios, sights and armour piercing ammunition. The numbers of types of tanks in each Regiment varied. For example, Queen's Bays had four A9 and three A10 in Regimental HQ with the main Squadron strength made up of 22 A13 and 21 Light Tank Mark VIC; 2RTR had eight A9, one A10, 18 A13 and 21 Light Tank Mark VIB and 5RTR had seven A9, three A10, 23 A13 and 23 Light Tank Mark VIB. The A9 figures included CS versions.

As part of a force to defend Calais, 3RTR landed on 22nd May with 30 Cruisers and 21 Light Tanks, spending the night trying to unload tanks and prepare them for action. Ordered to advance to St Omer on the 23rd, 'B' Squadron was engaged and lost several tanks including at least one A9CS. Smoke shells from other CS tanks allowed the remaining tanks to withdraw. Next day two German tanks were knocked out, though an attempt to take a ration convoy to Dunkirk escorted by tanks was blocked. Tank strength was down to nine Cruisers and 12 Light Tanks. These continued to patrol and engage the enemy, though with confused orders about evacuation some were destroyed by their crews. By the 25th only three Cruisers and four Light Tanks were operational which were still able to account for six Panzers that evening. Attempts to break out to Gravelines failed and the tanks were driven into the sea when they ran out of petrol. Just over half the Battalion's personnel were evacuated before fighting ceased on the 26th, and more were able to escape later.

The 2nd Armoured Brigade landed at Cherbourg on 20th May and moved East towards the River *Somme* to counter the German advance. The Queen's Bays were first into action on the 24th west of Amiens. Several tanks were lost and 'A' and 'B' Squadrons were combined. The other two Regiments of 2nd Armoured Brigade - 9th Lancers and 10th Hussars - caught up with them. On the 26th the evacuation from Dunkirk was ordered. The Brigade attacked on the 27th in support of the French. 10th Hussars moved too far ahead when a radio message failed to reach them, of 30 tanks which went into action 20 were lost and some of the survivors were damaged. The Bays also lost tanks and the two Regiments pulled back leaving 9th Lancers forward.

On 22nd May 2RTR and 5RTR arrived in Cherbourg and they fought their first action on the 27th. Attacking towards Abbeville 2RTR lost a Light Tank, three A9 and an A13 Mark II, with nine men killed and 11 reported missing before they were withdrawn. At St Valery 5RTR lost six men killed and seven wounded, and two of its Light Tanks and an A13 were hit and lost, another A13 was bogged down and abandoned, while two more Lights and three Cruiser tanks were hit but continued in action. Several others broke down and it was to take a few days to recover them.

Due to lack of spares and replacements, by the end of May, the Division were down to 65 Cruisers and 64 Light Tanks in working order. Their losses had been:

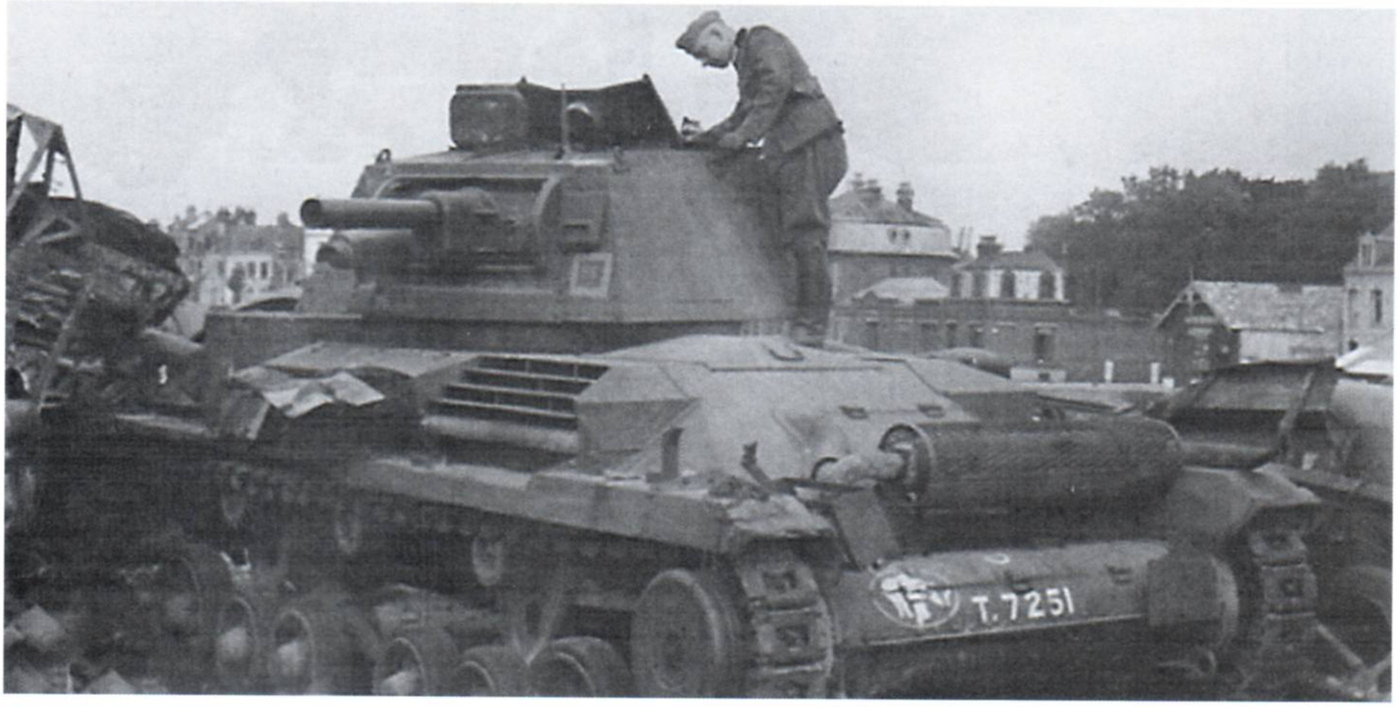
Type	Enemy action	Mechanical Faults
A13	22	22
A9	7	4
A10	2	12
Light VIB/C	34	17

On 4th June 2RTR had six A9, nine A13 and 17 Light VIB. They had lost three A9, an A10, two A13 and two Light Mark VIB in action and had one A9, 10 A13 and two Light Tank Mark VIB in various workshops. One A9 and an A13 were received on the 7th, but two Cruisers were lost that evening and 5RTR formed a composite squadron known as 'Z' Squadron on 29th May. It had two Cruisers in its Squadron HQ, two three-tank troops of Light Tanks and two troops with Cruisers, although the types were not stated.

Each Brigade was reorganized into one composite regiment as attempts were made to repair tanks. The 2nd Armoured Brigade comprised two Squadrons of 9th Lancers with a third Squadron drawn from Queen's Bays and 10th Hussars. On 7th June 3rd Armoured Brigade were down to 41 Cruisers and 31 Light Tanks. All available tanks were used to augment them, amounting to HQ and two Squadrons of 2RTR, one Squadron 5RTR and a Squadron of the Bays with Light Tanks, two more Light Tank Squadrons, the Divisional HQ's own protection troop and a few Infantry Tanks which were in the area. These forces steadily withdrew in front of the German advances.

On 15th June the French asked for an armistice. 1st Armoured was ordered to evacuate and priority was given to troops and most vehicles were left behind, with most of the Division sailing on 17th June. Tanks under repair were to be transported to port by train, but these did not arrive, while 3rd Armoured Brigade with 15 Cruisers, 14 Light Tanks, 11 Scout Cars and around 50 lorries travelled almost 200 miles by road, only one Cruiser and two Light Tanks failing to complete the march. There was not enough space to take all the vehicles, however, according to the Divisional Commander's account only 14 Cruisers and 11 Light Tanks along with 50 supporting vehicles out of 1,450 were evacuated from France, though others sources state nine Cruisers and 15 Light Tanks. Casualties were 58 killed, 70 wounded and 1,009 missing.

5RTR recorded four Light Tanks, one A9 and six A13 were sent to Workshops on the 26th, these were all tanks taken to France so must have been among those brought back. In addition, they were to have one of the A9s taken to France and handed over the 2nd Armoured Brigade reissued to them in North Africa some months later, so at least two A9 were returned to the UK!



An abandoned A9 CS T7251 of a 'B' Squadron's HQ, from one of 1st Armoured Division's regiments being examined by a German soldier, probably in Calais in 1940. (Private Collection.)

TABLE A	**A9**	**Light Mark III**	**Light Mark VI**
Divisional HQ	-	7	-
HQ 4th Armoured Brigade	4	3	3
8th Hussars	-	15	40
1RTR	23	-	26
HQ 7th Armoured Brigade	4	-	6
7th Hussars	7	-	48
6RTR	23	-	26
Total Available	68	25	149

Out of the total of 691 tanks recorded as lost in France including 1st Army Tank Brigade's Infantry Tanks and the Light Tanks of the Infantry Division's Divisional Cavalry Regiments were 158 Cruisers with six of them A9 and 18 A9CS. A report by 1st Armoured Division's Commander stated that A9 has proved unsatisfactory both mechanically and tactically, was under-powered, too slow on roads with poor cross country performance, and its tracks were badly designed for wear, repair, and grip. However, the 2 pounder gun used on all Cruisers was described as "Accurate, hard-hitting up to, but excluding, the German 30-ton tank, rate of fire satisfactory."

Of the tanks left behind, many where photographed by German propaganda officials and individual soldiers. Two A9CS were shipped back to Germany for tests by the Army Weapons Office. One - from its markings, a 3RTR tank - was at part of a display of captured British and French vehicles. There is nothing to show any were operated by the Germans although they were assigned the designation *Kruezer Panzerkampfwagen Mk I 741(e).*

British officialdom also caught up with the tank. On 11 June 1940, instructions were issued for A9 to be redesignated, 'Cruiser Mark I' or 'Cruiser I'. Many documents still used the older styles at times, a proposal in August that Cruisers were to be 'Reptile Class' tanks would have meant Cruiser I becoming 'Krait' was not adopted and when names for British tanks became common in late 1941 the A9 or Cruiser I had had its day.

As far as I can tell, the final few A9 were completed by the end of the French campaign or shortly after. Units were issued with what tanks available and 2RTR, for example, received one squadron's worth of A13 Mark II and two of A10 with a few A9 at SHQ and were back at full strength before they sailed to North Africa in August, while 5RTR received six A9/A9CS, 34 A10/A10CS, 22 A13 and three Valentines to be at almost full strength in July. They sailed for the Middle East in October.

A detailed list from the end of 1940 states that 1st Armoured Division had three A9 and 10 A9CS, 2nd Armoured Division had six A9CS while 7th Armoured Division had 60 A9 included CS tanks. As new types came into use and units moved to North Africa, fewer older Cruisers remained in the UK. Figures for June, July and August 1941 showed 8 A9CS, 6 A10CS and around two dozen A13 Mark II in 1st Armoured Division alongside newer Covenanters and Crusaders but none with any other unit. After 1st Armoured moved to the Middle East at the end of September, A9 were not listed at all.

North Africa

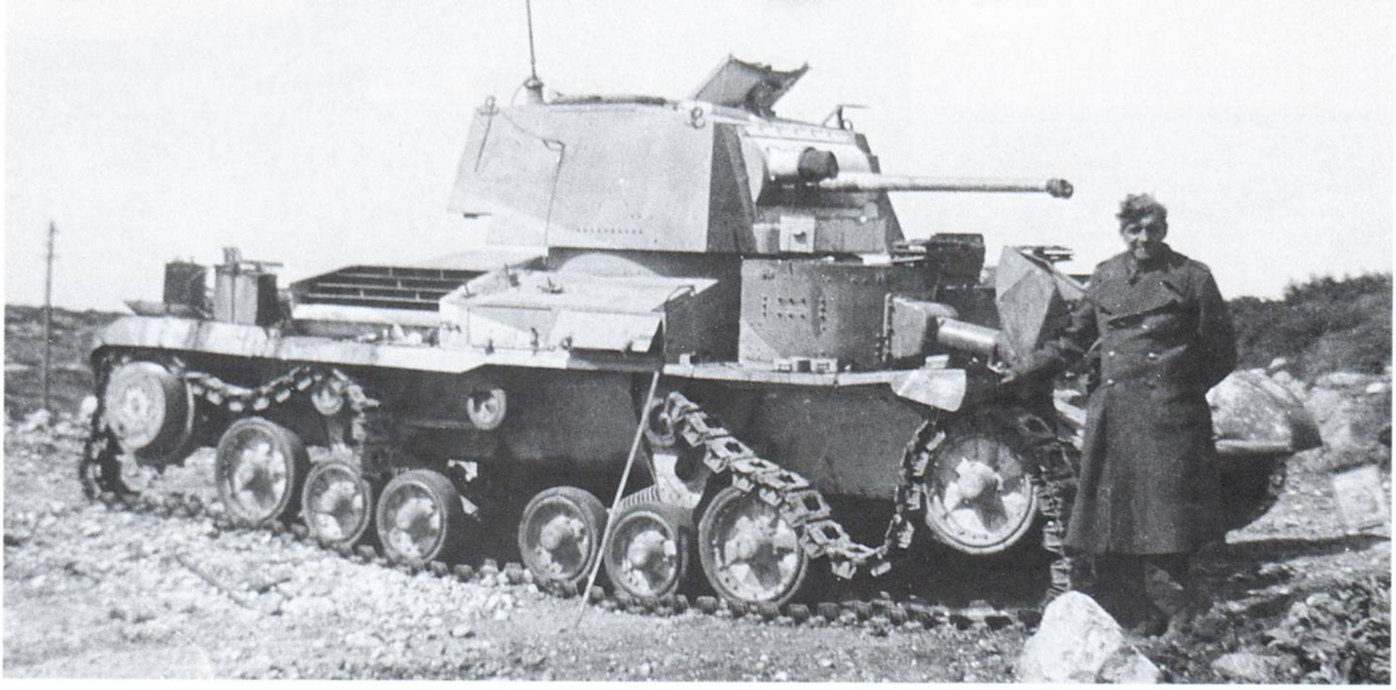
The Mobile Division, Britain's tank unit in the Middle East, was renamed The Armoured Division (Egypt) at the outbreak of war. Its 'Heavy Armoured Brigade' comprised 1RTR and 6RTR while the 'Light Armoured Brigade' was made up 7th Queen's Own Hussars and 8th King's Royal Irish Hussars plus 11th Hussars (Prince Albert's Own) equipped with armoured cars, who usually operated separately. When the Division was renamed 7th Armoured Division in February 1940 the Brigades were restyled 4th Heavy and 7th Light Armoured Brigades.

Units were often under strength and used different types of tank at the same time. In many cases the actual type is not recorded in the records which only give totals for 'Cruisers' and 'Light Tanks'. Luckily there are a few more specific references to show what was in service. In August 1939 7th Hussars and 8th Hussars had Light Tanks while 6RTR had both Medium and Light Tanks. When war was declared 1RTR used both Light Tanks and Rolls-Royce Armoured Cars, though by January 1940 both 1RTR and 6RTR were equipped half and half with Cruisers and Light Tanks.

In April the Armoured Brigades became simply 4th and 7th Armoured Brigades and were reorganized by swapping 7th Hussars and 1RTR between them. The 7th Hussars were to have two Squadrons of Light Tanks and one with Cruiser A9. There were not enough Cruisers available though more were expected in May. The 8th Hussars would keep their Light Tanks until their old Light Tank Mark IIIs could be replaced when A9 became available. Both 1RTR and 6RTR were to stay as they were. The Tank State would then be as in **TABLE A.**

The A10s were expected to start arriving at the rate of 10 a month in July and become operational in August, when it was hoped to use A10 to replace A9 which would then go the two Hussars regiments.

The 7th Hussars War Diary tells us that on 2nd April they handed 10 Light Tanks to 8th Hussars and received three Cruisers with three more arriving the next day. These were in a deplorable state without machine guns or internal intercom systems. There were also other problems. As at 4th May, several A9 were without 2pdr guns and the numbers in each unit were listed. Divisional HQ had five A9 including three without guns. HQ 4th Armoured Brigade had four, 7th Hussars seven and 6RTR had 23, all fully-armed. HQ 7th Armoured Brigade had no A9s and neither did 8th Hussars, while out of 23 in 1RTR



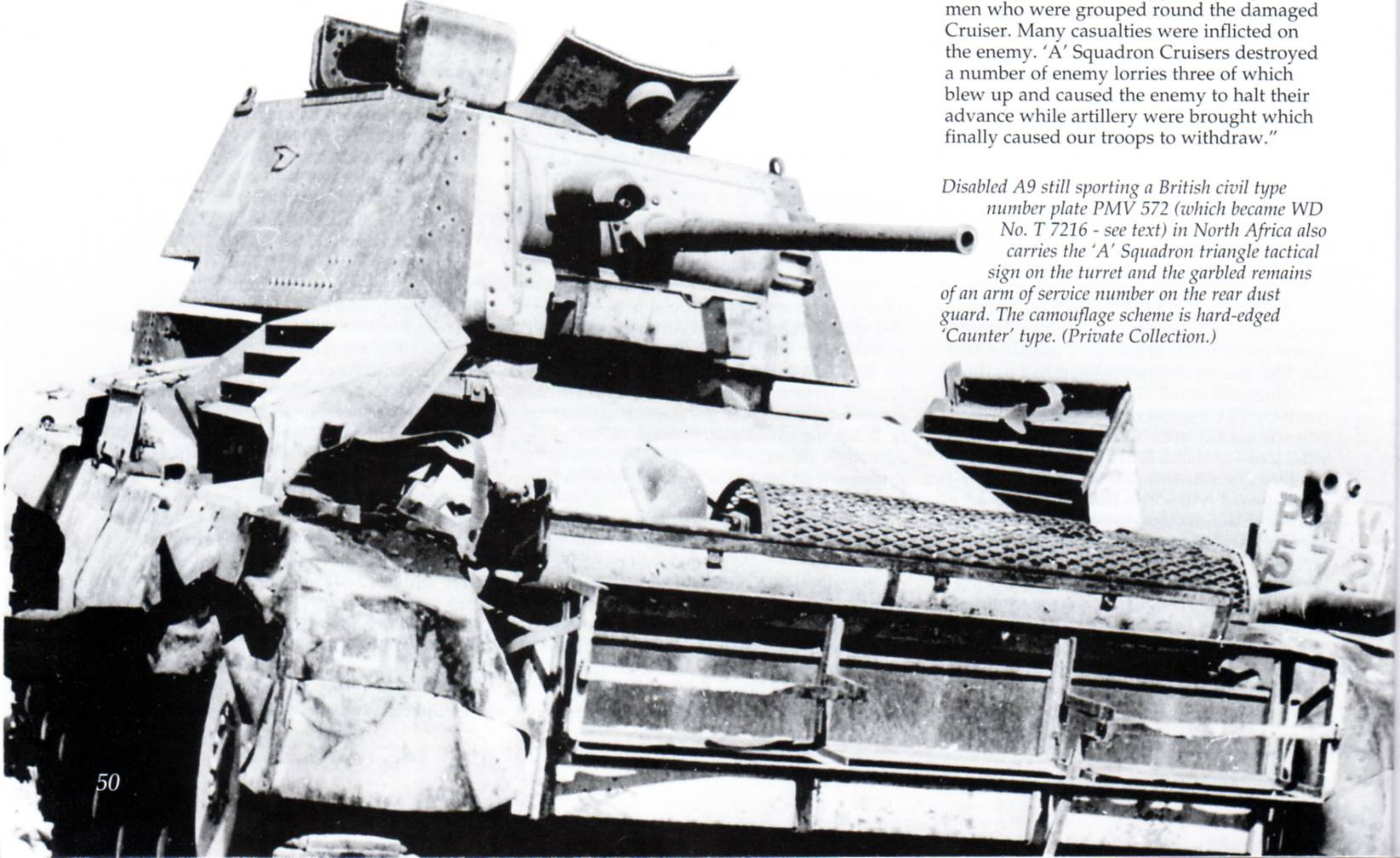
Broken track - one of the problems with the A9. This vehicle finished in the Caunter camouflage scheme was serving in 5RTR in North Africa. (Private Collection.)

there were eight without guns. A series of photos were taken of 1RTR at Abbassia Barracks at the end of May and at least one A9 was still without its gun then.

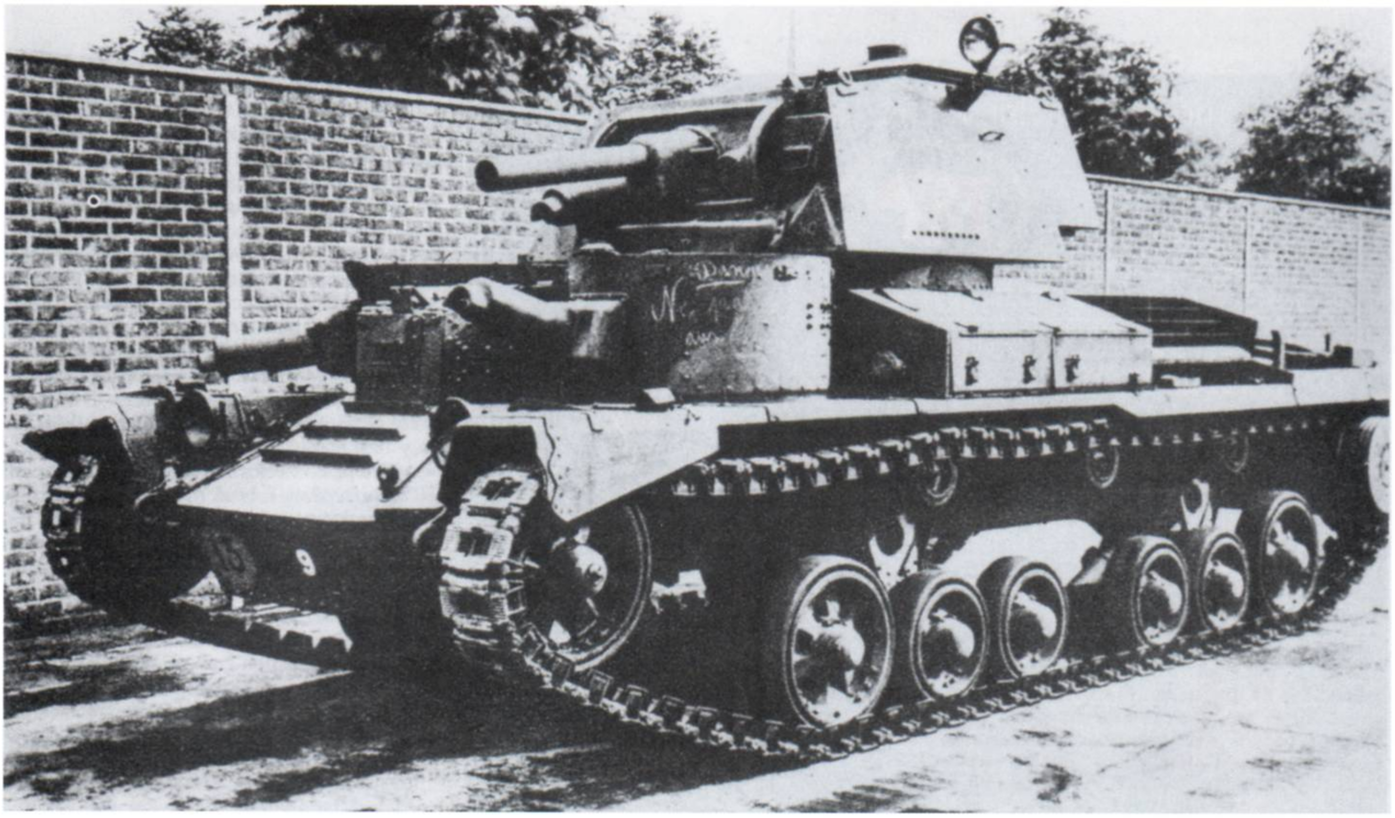
Italy declared war on 10th June 1940 and the first actions in the Desert campaign were not long in coming. On the 14th 7th Hussars' 'A' and 'B' Squadrons took part in an attack on Fort Capuzzo. Six Cruisers of 'A' Squadron engaged the fort with 2pdr guns while their Light Tanks added fire with their machine guns. No Cruisers were lost, but three Light Tanks hit mines and were burned to prevent them being captured. Two days later 11th Hussars sighted an convoy of Italian trucks escorted by a dozen CV3 tankettes. 'A' Squadron 7th Hussars and a troop of 2pdr anti-tank guns of 'J' Battery Royal Horse Artillery were brought forward. Several Italian tanks were knocked out, but the Italians were not afraid to fight back. At one point, a Cruiser was chased by a CV3 whose machine guns could do little damage and it was finally knocked out by 2pdr shot.

The 7th Hussars continued fighting around Capuzzo through July. On the 9th another Italian column was attacked, the Regiment's War Diary noting: "For some reason the 2pdrs on the Cruisers were a failure, the first time they have been anything but 100 %. No tanks were lost". On the 22nd they were relieved by 8th Hussars and pulled back to rest. A summary of the operations stated: "Vehicles have stood up well, but this was mainly down to Lieutenant Astley Rushton, 2nd Lieutenant Dean and their Staff, who worked unceasingly night and day to keep us on the move". On 4th September they were three Cruisers and six Light Tanks short of their full establishment, and by the end of the month were short of seven Cruisers and five Light Tanks. They were not to see more action until December.

Operations continued with the Italians entering Egypt in September. 'C' Squadron 1RTR were engaged at Abu Nir and lost a Cruiser in action on 14th September. They had one A9 Squadron at SHQ, two Troops with five Light Mark VI between them and five A9 in another two Troops. Their War Diary's Summary of Events for 13th to 17th September recorded: "One Cruiser tank (Tank No. 3536) was hit by enemy artillery on tracks and turret and had to be abandoned - three of the crew escaped, but owing to intense shellfire the remaining two were captured. Later in the day a Light Tank of 'A' Squadron was in observation at a distance of 800 yards and fired on approximately 100 men who were grouped round the damaged Cruiser. Many casualties were inflicted on the enemy. 'A' Squadron Cruisers destroyed a number of enemy lorries three of which blew up and caused the enemy to halt their advance while artillery were brought which finally caused our troops to withdraw."



Disabled A9 still sporting a British civil type number plate PMV 572 (which became WD No. T 7216 - see text) in North Africa also carries the 'A' Squadron triangle tactical sign on the turret and the garbled remains of an arm of service number on the rear dust guard. The camouflage scheme is hard-edged 'Caunter' type. (Private Collection.)



Spoils of war. An A9 CS of 3RTR, 3rd Armoured Brigade, 1st Armoured Division captured and photographed by the Germans in 1940, probably in Calais. (Private Collection.)

An Italian column of trucks and seven CV3 were spotted, but could not be engaged as only two Cruisers were now in action. One tank had developed engine trouble and had to be towed by another while one broke a track. Casualties were listed as the A9 captured and two men taken prisoner. The Italians lost four lorries and at least 100 casualties.

The report ends with: "Armour of Cruiser Tank - The captured Cruiser Tank although hit some 20 times appeared to be almost undamaged. The two men left in the tank were seen to be helped away by a man on each side so could not have been seriously wounded." The Italians operated an A9 against British forces and it may have been this tank, so despite being repeatedly hit it was still battle-worthy. A couple of photos are known of what must be this tank under its new management showing a large Italian flag painted on the side of the turret, but still carrying the original 24 on red arm of service marking on one front mudguard and the red and white 7th Armoured Division sign on the other.

On 20th September 1RTR recorded that they had 17 Cruisers and 19 Light Tanks. Reports for later dates list tanks in some detail:

31st October - 13 A9 Mark I, 19 Light Marks VI VIA VIB.

30th November - 20 A9 & A10, 22 Light Marks VI VIA VIB.

31st December - 16 A9 & A10, 16 Light Marks VI VIA VIB, two Scout Cars.

'B' Squadron 6RTR sent seven A9 and the same number of Light Tanks to support infantry and artillery of 10th Indian Brigade to capture the Italian fort at Gallabat which thwarted an attack on Khartoum. Starting their journey on 9th September, they travelled by train to the *Nile* where they were loaded onto barges to be towed South. Arriving at Wadi Halfa early on the 18th they transferred to a train to move to Atbara. One A9 developed mechanical trouble and was cannibalized to provide spare wheels for the others. Last-minute preparations were made on 5th November and the attack began around 6am on the 6th. A Light Tank was left behind, one A9 and a Light Tank suffered broken tracks and another Light was ditched. Two Light Tanks supported a separate attack, while five A9s and a single Light Tank split into two groups and attacked the fort from opposite sides. Breaking through the outer barbed wire and crashing through the low walls, they circled around inside though most stopped with broken tracks. Two were hit by a captured .55in Boys anti-tank rifle and one was then attacked by an improvized Molotov cocktail. After the action was over, tracks were repaired using a variety of rods and barbed wire. Two Light Tanks were recovered, but one which could not was blown up, the Squadron Commander's A9 was hit by a bomb during a low-level air attack the following day and was abandoned after its guns were removed. Four A9 and the remaining Light Tanks moved to Doka and the Cruisers were fitted with new tracks the following week. A9 T3534 from this detachment was photographed on New Year's Day 1941 carrying Haili Sellassie, Emperor of Abyssinia and his son and captioned as: 'In service with Abyssinian troops'.

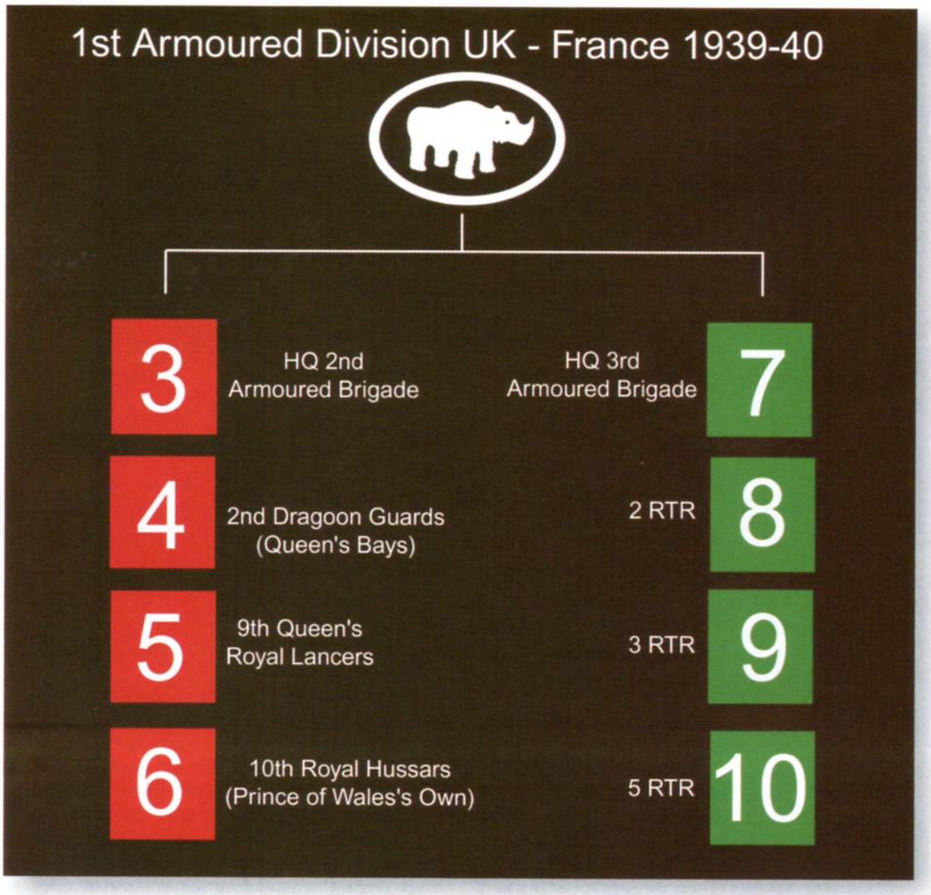
A surviving report lists the Tank Situation in 7th Armoured Division at 20th October. The Light Tanks were all Mark VI series, and the Cruisers were Mark I or A9 apart from 2RTR which had six Mark ICS and 45 Mark IIA and Mark IV (A10 and A13 Mark II). In addition to tanks with the Division, and in Workshops, 18 Cruiser Mark IIA were expected to arrived shortly and be ready for action by mid-November.

All these would be needed as a major offensive was planned. This was Operation *Compass* which began on 9th December and the situation as at 6th December 1940 has also survived and is listed in **TABLE B.**

While in theory there were over 30 more tanks than required to equip units, many were in workshops and there was a shortage

TABLE B

Unit	Establishment Cruisers/Light Tanks		Holdings 20th October Cruisers/Light Tanks		Holdings 6th December Cruisers/Light Tanks	
HQ 7th Armoured Division	8	-	1	1	1	4
HQ 4th Armoured Brigade	10	-	-	3	-	3
7th Hussars	-	58	2	36	4	34
2RTR	52	-	51	-	36	16
6RTR	52	-	16	20	16	17
HQ 7th Armoured Brigade	10	-	2	5	2	5
3rd Hussars	52	-	-	51	16	36
8th Hussars	-	58	5	36	4	34
1RTR	52	-	18	24	16	22
RAC Base Depots	7	12	24	58	6	8
Workshops	-	-			41	82
Total	243	128	119	229	137	268


1st Armoured Division UK - France 1939-40
3
HQ 2nd Armoured Brigade
HQ 3rd Armoured Brigade
7
4
2nd Dragoon Guards (Queen's Bays)
2 RTR
8
5
9th Queen's Royal Lancers
3 RTR
9
6
10th Royal Hussars (Prince of Wales's Own)
5 RTR
10

of 106 Cruisers against 140 too many Light tanks. Operation *Compass* led to the Italians retreating, Sollum was captured on 17th December. Brigade records list the tank situation in the various Regiments in 7th Armoured Division in more detail:
4th Armoured Brigade (as at Boxing Day 26th December, after repaired vehicles had rejoined)
7th Hussars - three A9, 37 Light Tanks.
2RTR - four A9, seven A10, 14 A13.
6RTR - 12 A9, 16 Light Tanks.
7th Armoured Brigade (as at 19th December).
3rd Hussars - nine Cruisers, 18 Light Tanks.
8th Hussars - three Cruisers, 19 Light Tanks.
1RTR - 12 Cruisers, 19 Light Tanks

TABLE C

Unit	Light	Cruiser
HQ 7th Armoured Division	4	1
HQ 4th Armoured Brigade	3	-
7th Hussars	34	4
2RTR	16	32
6RTR	9	9
HQ 7th Armoured Brigade	5	2
3rd Hussars	36	14
8th Hussars	36	4
1RTR	22	16
Total 7th Armoured Division	165	82
Total 2nd Armoured Division	52	66
Base Ordnance Depots, etc.	172	55

The 1RTR War Diary for 31st December listed 16 A9 and A10, 16 Light Tank Marks VI/VIA/VIB plus two Scout Cars.

The year 1941 started well enough, when on 5th January Australian troops took Bardia and 40,000 prisoners were captured. On the 22nd Tobruk was captured, and on 7th February the main body of the Italian forces was cut off at Beda Fomm. British tank strength was 95 Light Tanks and around 50 Cruisers A9, A10 and A13. A column consisting of the three Regiments in 4th Armoured Brigade - then 3rd Hussars, 7th Hussars and 2RTR - with infantry from the Rifle Brigade and artillery support. The strongest unit was 2RTR with 25 Cruisers, mostly A13 though after this action where they claimed 79 Italian tanks their own losses were an A13 and two A9.

A report of 15th February 1941 listing problems with the A9 and A10 reported clutch problems due to a lack of dust proofing, some road wheel tyre failures, securing bolts on the suspension units working loose, and some hub bolts on the track adjusters sheared. As at 20th February 1941, the day when the first German forces were encountered, the Tank State was as in **TABLE C.**

On 8th March, the Middle East Tank State was 253 Cruisers and 364 Light Tanks. This was 417 short on Cruisers although 6RTR was using captured Italian M13 tanks which reduced the shortage to 365, with 246 Light Tanks surplus to requirement. A comment on 14th March stated that: "Employed against German Armoured Divisions the Light Tank is useless". The Germans pushed forward on 31st March. There were still a number of A9 on strength as highlighted in **TABLE D.**

TABLE D

	Light Tanks II-III	Light Tanks VI series	A9	A9CS	A10	A10CS	A13
Total for 1st April	31	368	66	6	89	12	85
12th April with units	-	176	28	6	28	12	29
12th April in Depots	31	148	38	-	28	-	16
Total for 12th April	31	324	66	6	56	12	45

No new A9 had arrived in North Africa. There had been some A10s, the big *Tiger* convoy carried Matildas, Light Tanks, A13s and the then-new A15 Crusader. Those available were repaired; between 18th April and 11th July 1941 some 28 A9 were overhauled in workshops and returned to units. When 1RTR arrived at Tobruk by sea - their War Diary and contemporary maps spelled it 'Tobruch' - on 7th April they had an A10, two A9 and a Light Tank in RHQ, 'B' Squadron had eight A9 and 'C' Squadron 15 Light Tanks.

They were soon in action, two Cruisers with at least one being an A9 were lost on 11th April in an action with two 'heavy tanks' and several M13 and CV3. They knocked out some German tanks in the early hours of 14th April; four were claimed hit by 2pdr fire, though two A10 and a Light Tank were lost. On the 17th they were called out twice, the first time they were not engaged, but on the second 'B' Squadron accounted for three enemy tanks without loss to themselves. On the 18th they reorganized, handing their Light Tanks to 3rd Hussars and receiving A13s from 5RTR. This left them as RHQ with three Cruisers, 'A' Squadron with A9 and A10 and 'C' Squadron with A13.

On 1st May they engaged some 25 enemy tanks. RHQ committed three A9/A10, 'A' Squadron five A9/A10 and 'C' Squadron nine A13 along with 18 Matildas from 7RTR and two troops of Light Tanks from 3rd Hussars. 1RTR lost an A10 and had an A9 damaged which was recovered on the 22nd. Their RHQ carried out a night attack early on the 4th with the Matildas of 7RTR who were under their administrative command. Tank strength that day was listed in detail: RHQ had two A13, 'B' Squadron four A9 and two A10, 'C' Squadron seven A13 while 'D' Squadron 7RTR had 15 A12 I's or Matildas. Actions on the 13th involved 'C' Squadron and 'D' Squadron 7RTR, and two Matildas were lost. On the 15th there was more action, but no casualties. On the 23rd the A9 which had been recovered was handed over to Advanced Ordnance Workshops. More reorganization on the 28th gave the Regiment an RHQ of three Light Tanks, 'A' Squadron with five A9, six A10 and three Light tanks with 12 A13 and three Light Tanks in 'C' Squadron, 'D' Squadron 7RTR having 15 Matildas and three Light Tanks. On the 30th a group of three Cruisers and three Light Tanks of 'C' Squadron were sent to act as artillery OPs, with no casualties.

The hull turret machine guns were removed from the A9s at the start of June to be used as AA protection and the gunners' seats and turret were filled with sandbags. There were several reorganizations though overall tank strength did not increase.

Other units also used A9 during this period. During Operation *Battleaxe*, on July 15th 2RTR had 10 A9, 11 A10 and 21 A13 Mark II, though by the dawn on the 17th they were down to three A9, seven A10 and five A13. At the same period, 5RTR which was equipped with Matildas and a few Light Tanks had two A9. On 11th August, 7th

Hussars had A9, A10 and A13 Mark II, but their A9s were to be replaced with A10s. As at 7th September, the Cruiser Tank State was as in **Table E.**

On 1st November 1941 the state of A9 was:
HQ 7th Armoured Division - 6.
HQ 7th Armoured Brigade - 8.
HQ 1st Army Tank Brigade - 4.
44RTR - 2.
8RTR - 2.
1RTR - 6.

A report dated 4th November 1941 on the AFV Overhaul Programme stated that: "Mark I Cruiser Tanks (A.9) are no longer required operationally in Middle East, and will be used for training only." Work on them was given a lower priority than other tanks and would only be done when it did not interfere with other work. A separate report referring to obsolete Cruisers in the Middle East said there were 58 Mark I along with 52 Mark II. The A9 were distributed as - 32 in the Western Desert, six in Tobruk and 10 each in Base Ordnance Works and Training Schools.

The next major offensive aimed at relieving Tobruk was code-named *Crusader* and set for 19th November. This would include 1st Army Tank Brigade's Matildas and Valentines plus a few A13 and Light Tanks, and 7th Armoured Division expanded with 22nd Armoured Brigade. In all, its three Armoured Brigades had a variety of tanks. The 4th Armoured Brigade - 8th Hussars, 3RTR and 5RTR - had the then-new American M3 Light Tank 'Stuart', while in 7th Armoured Brigade the 7th Hussars operated a mix of Crusaders, A13 and A10, 2RTR had A13 and 6RTR used Crusaders while 22nd Armoured Brigade comprised of Yeomanry regiments - 2nd Royal Gloucestershire Hussars, 3rd and 4th County of London Yeomanry - used Crusaders. The only A9s present were five or six each in the Headquarters of 4th and 7th Armoured Brigades.

However, 1RTR in Tobruk still had its A9s. They had been part of 3rd Armoured Brigade since April, but on 16th September orders were received that control of the tanks in Tobruk would come under 32nd Army Tank Brigade. This Brigade was officially formed on the 15th under the command of Brigadier A.C. Willison DSO, MC to take over 3rd Armoured Brigade. He travelled to Tobruk and arrived on the 18th. His command consisted of:
Brigade HQ - an AEC 'Dorchester' Armoured Command Vehicle plus three Light Tank Mark VIB.
1RTR with 5 A9, 9 A10, 13 A13 and 22 Light Tank Mark VIB.
'D' Squadron 7RTR with 15 Infantry Tank Mark IIA* (Matilda) and two Light Tank Mark VIB.
'C' Squadron, 1st The King's Dragoon Guards with 26 Marmon Herrington Armoured Cars.
plus 32nd Army Tank Brigade Signals

The Advanced Ordnance Workshop at Tobruk had one Marmon Herrington, an A9 and three Matildas under repair. Three damaged A9 Cruisers were dug-in as anti-tank emplacements on the Derna Road while personnel from 1RTR also manned dug-in captured tanks, though how many and what type was not recorded.

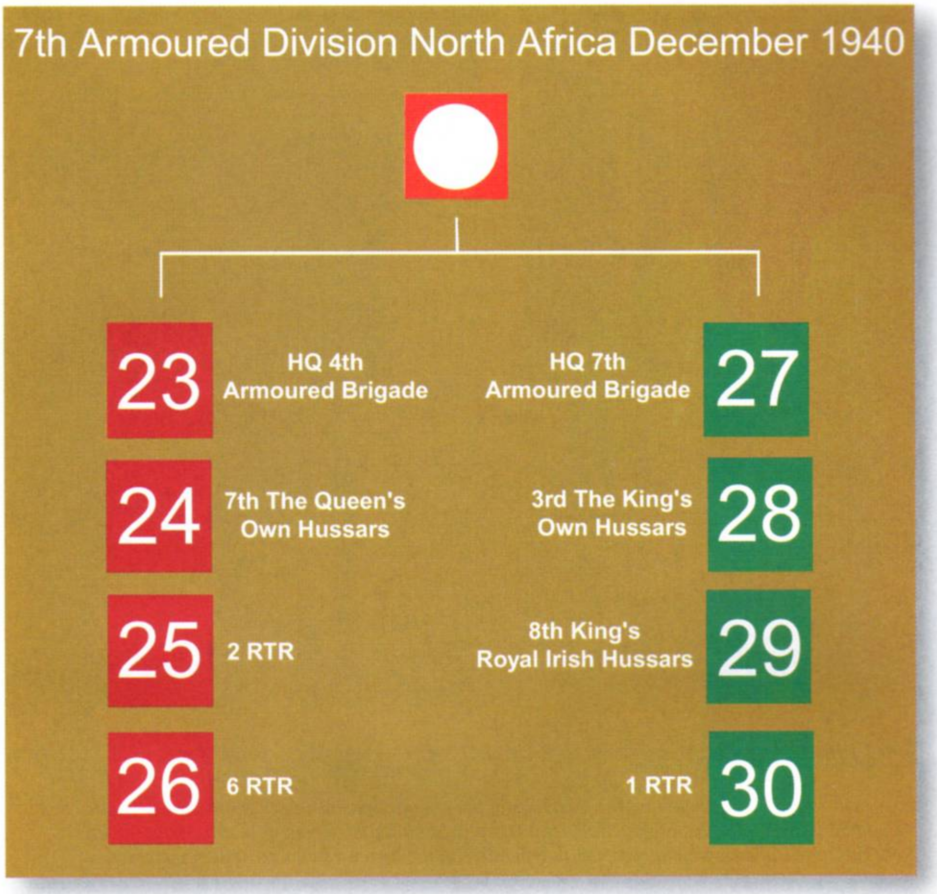

7th Armoured Division North Africa December 1940
23
HQ 4th Armoured Brigade
HQ 7th Armoured Brigade
27
24
7th The Queen's Own Hussars
3rd The King's Own Hussars
28
25
2 RTR
8th King's Royal Irish Hussars
29
26
6 RTR
1 RTR
30

TABLE F

12 - 16 November	Two centre	Scollops
17 - 26 November	Two top	Oscar
27 - 31 November	One top one centre	Coquette

TABLE E

	In Middle East	Under Repair	Running	Schools etc.	Available
I A9	48	10	38	6	32
II A10	42	9	33	2	31
IV A13	85	18	67	3	64
VI A15	67	14	53	2	51
Totals	242	51	191	13	178

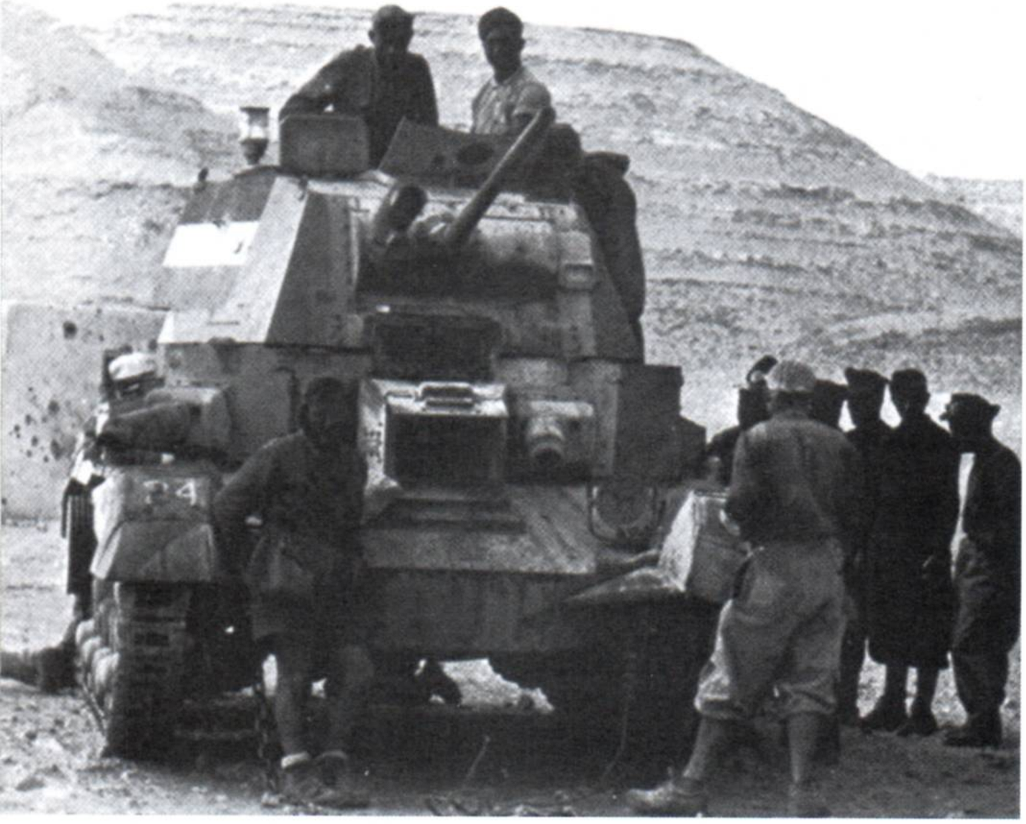
A series of photos showing 1RTR were taken at this time. The original captions read: PICTURES FROM TOBRUK Lt Vanderson 12/09/41. "With the Tanks at Tobruk - Cruiser and light tanks are seen in these pictures out on patrol. Most of the officers and men of these tanks have taken part on the war in Libya since its commencement." In fact no Light Tanks are shown, only Matildas and A9s including T7199 and T7214 of which more later.

At the end of October, the 9th Australian Division left the Tobruk fortress and command passed to the British 70th Division. Tank reinforcements came in the form of 4RTR with Matildas and some Light Tanks Mark VIC. No other AFVs were received, and such was the shortage of tanks that early in October one of the A9s dug in at the Derna Road aerodrome was recovered by 32 ATB's Light Recovery Section to be rebuilt for use by Brigadier Willison. It was to take a whole month for the work to be completed as it was only handed over on 5th November. As at 19th October the AFV strength in Tobruk has risen to 69 Infantry Tank Mark IIA*, six A9, nine A10, 13 A13, 27 Light Tank Mark VIB and seven Mark VIC plus 29 Marmon Herrington Armoured Cars and six Scout Cars.

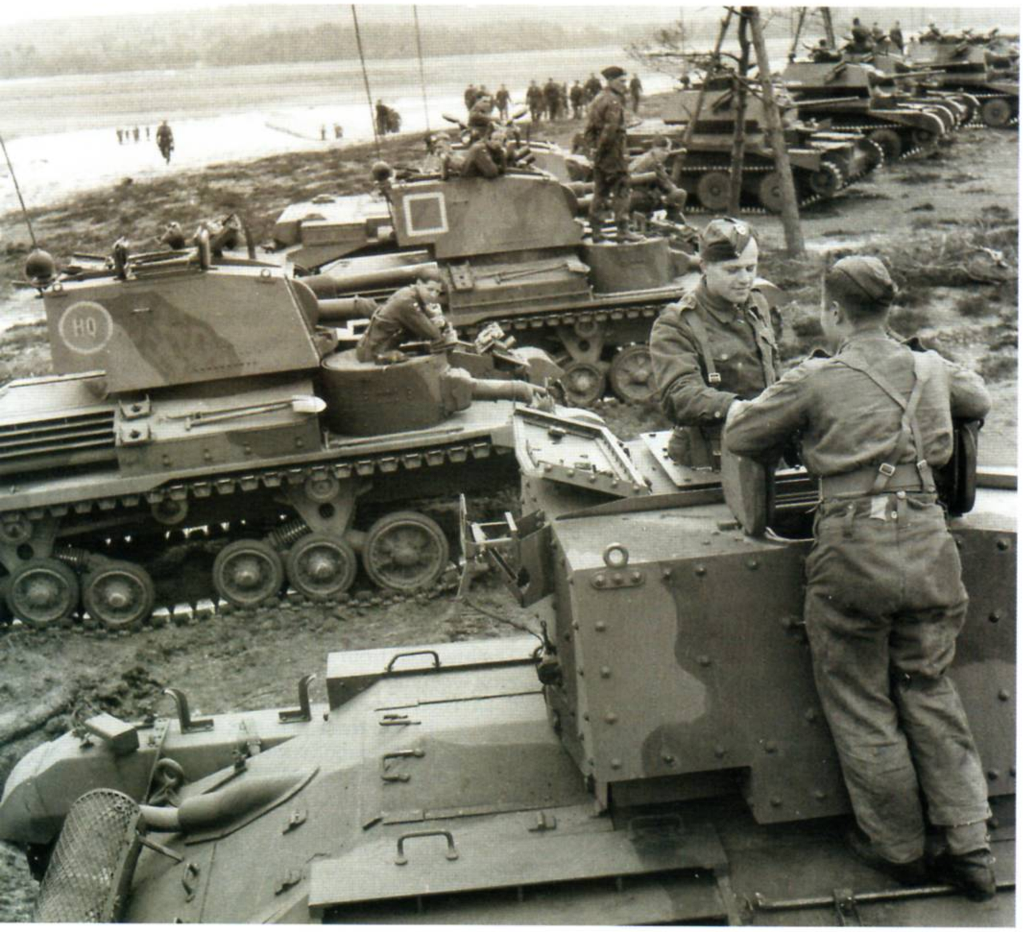
A second dug-in A9 was recovered and taken to the Workshops for repairs and replacements, this took place on the 22nd according to HQ 32nd Army Tank Brigade, but the Light Recovery Section recorded in as the 27th. On the 23rd a single Light Tank VIB was issued from workshops to 1RTR, while on the 27th manning the dug-in enemy tanks was taken over by Royal Artillery crews. They received a small boost to their strength on 5th November in the form of a Light Tank Mark VIB from Brigade HQ when they received the repaired A9. By this time the plans for the breakout from Tobruk as part of Operation *Crusader* were well under way. On 18th November the second recovered A9 was handed over to Brigade HQ.

The breakout from Tobruk was part of the overall Operation *Crusader* offensive, with 70th Division's operations code-named *Everest*. As part of these plans, 32nd Army Tank Brigade Operation Instruction No.5 of 12th November was issued. This was in conjunction with Operation Order No 11 of 5th November and listed special markings were to be applied to AFVs. These stated:
"5. Recognition pennants will be flown in specific positions on all AFVs on wireless masts. (See **TABLE F**)

If it is necessary to change the position to another before the date stated, the appropriate code word will be passed and the pennants changed. Units will change the position on the dates shown automatically. Commanders pennants will be flown under-



Turncoat cruiser! An A9 bearing the markings of the senior regiment in 4th Armoured Brigade, 7th Armoured Division (probably the 7th Hussars) captured by Italian forces in North Africa, 1940/41. Note the large Italian tricolour national flag painted on the turret side for recogition purposes.



A9 Cruisers of the 2nd Dragoon Guards, Queen's Bays, 2nd Armoured Brigade, 1st Armoured Division on excercise in the UK in early 1941. This may be part of the Brigade's headquarters, as the A9s with 'C' and 'B' squadron's tactical marks are Close Support versions with 3.7in guns. The Regiment's A13 Cruisers are lined up in the background. Modellers please note the different camouflage patterns on the turrets and hulls of the three A9s! (Crown Copyright.)

neath the recognition pennants in all cases.
6. All AFVs (including captured tanks on charge to Polish Brigade, and Light tanks used as armoured observation posts) will have the following distinctive marks painted on them as soon as paint is available. Three vertical stripes each 6ins wide and up to 18in long according to space available. The outer stripes will be WHITE and the centre stripe RED. These marks will be painted on:-
(i) both side of turrets.
(ii) both sides of sand shields forward end.
(iii) front centre panel of hull in line with idler wheels.

It is expected that paint will be available on 12 Nov 41 and as soon as the paint is received by TOBRUCH HQ, 32 Army Tank Brigade will collect on bloc and issue to Units. Brushes will also be issued with the paint."

When operations commenced on 21st November, 'B' Squadron's day began with three tanks having track trouble, recorded as A9 T7214, an A10 and the Squadron Commander's own Light Tank. The Squadron Commander took over another Light Tank and at 0700 hours they crossed the start line where another A10 broke a track. They remained dispersed as radio communication was not good; it was not until the Brigade Commander halted his own A9 nearby that a clear picture was obtained. At 0915 they advanced including the A10 which had broken down on the start line and the original commander's Light Tank. The A10 was soon blown up on a mine, and as there were several other vehicles damaged on this minefield the Squadron was halted alongside Brigade HQ. The Squadron Commander's tank was hit by a 25pdr shell and put out of action although there were no casualties. 'C' Squadron also lost four tanks to mines and three were hit by anti-tank fire, several men were wounded.

On 22nd 'A' and 'B' Squadrons combined, various actions were fought and strength fell steadily as tanks broke down or were knocked out though some of the breakdowns were repaired and returned. The action on 14th December saw the few tanks of the composite Squadron making a recce for HQ 5th Indian Brigade. This consisted of five Light Tanks, an A10 and two A9s - T7199 and T7200. One Light Tank was left in reserve when they moved out at 0800 and they were under artillery fire all day. Shortly after midday 12 German *PzKpfw III* tanks attacked, the Cruisers countered from the enemy rear, firing at 3,000 yards range and the Germans withdrew after 15 minutes leaving three of their number knocked out. One Light Tank had a track blown off. Together with the three operable Light Tanks the Cruisers remained forward until 1530hrs when they came under heavier fire and withdrew. The damaged Light Tank was repaired and, together with another, it protected the Indian Brigade's Brigadier. The Cruisers were ordered back, but due to an error in navigation they ran into the enemy's front line troops who they thought were Indians. The two A9s and their crews were captured, T7199 was seen to go up in flames and other troops in the area were alerted to the possibility that T7200 was in enemy hands.

The following two days were quiet as the few remaining tanks were maintained, on the 17th the hand over of tanks began as preparations were made for 1RTR to withdraw to the Delta. Stores and equipment

Two of the Queen's Bays A9 CS tanks in the accompanying photo travelling over some very soft, sandy ground. (Crown Copyright.)

were handed to 8RTR on the 19th, the remaining trucks were used to move troops to the railhead with the first party travelling to Alexandria on the 22nd by rail with others following by road. By the end of the month, most of them were enjoying seven days leave in Cairo.

After these operations, the few A9s which remained soldiered on, though with more British Crusaders, American M3 Light Stuart and later the new M3 Medium Grant tanks available, their numbers and value decreased. As at the start of February 1942 there were 36 'Cruiser I' in the Middle East, but of these only 10 were with units and the remainder were in Base Ordnance Workshops, while there were also 15 'Cruiser II' with units plus another 11 in Workshops. Losses at least are known. A detailed report on tanks lost in the Middle East up to the end of 1942 recorded 24 'Cruiser I' - which seems a low figure - compared with 85 'Cruiser II, IIA and IIACS'. None were listed as being lost at sea!

Some must have remained in use for training. ACI 52/43 of 9th January 1943 dealt with 'Disposal of Obsolete A Vehicles'. All the early Cruiser series I through IV including both 'Cruiser I and ICS' were listed as to be used while spare parts allowed, if needs be by cannibalization. This may have extended the useful lives of a few tanks, but only briefly, as on 11th September ACI 1356/43 1943 ordered that all early Cruisers were to be broken up for scrap as soon as possible.

As far as is known, only one A9 survives in the Tank Museum at Bovington. Its polished brass data plate states 'Cruiser Tank A9 Mark I Makers No 2047/44 W.D. No. T.7230 Date February 1940' . Whether A9 played a great part in British AFV development and use is open to debate. They were certainly there and are worth recording.

Acknowledgements, Bibliography and Sources

I would like to say 'Good on ya, Mates' to Mark Mackenzie and Shane Lovell for their support and help with references and photos.
Details of development come from Vickers archives, production figures and serials from various files at the Tank Museum Archives. Figures for losses in France and 1st Armoured Division report come from early Half Yearly Reports on the Progress of the Royal Armoured Corps at the Tank Museum.
Detail of actions, dates and figures are from various files at The National Archives in Kew:
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WO.167/449 - 5RTR France 1940.
WO.167/458 - 3RTR France 1940.
WO.169/27 - GHQ Middle East AFV 1940.
WO.169/102 - HQ 7th Armoured Division 1939/1940.
WO.169/122 - HQ 4th Armoured Brigade 1939/1940.
WO.169/123 - HQ 7th Armoured Brigade 1939/1940.
WO.169/128 - 7th Hussars 1939/1940.
WO.169/234 - 1RTR 1939/1940.
WO.169-241 - 6RTR 'B' Squadron 1940.
WO.169/952 - GHQ Middle East AFV 1941.
WO.169/1303 - 32nd Army Tank Brigade 1941.
WO.169/1305 - 32nd Army Tank Brigade Light Recovery Section 1941.
WO.169/1409 - 1RTR 1941.
Copies of Regimental War Diaries are also at the Tank Museum's Archive.

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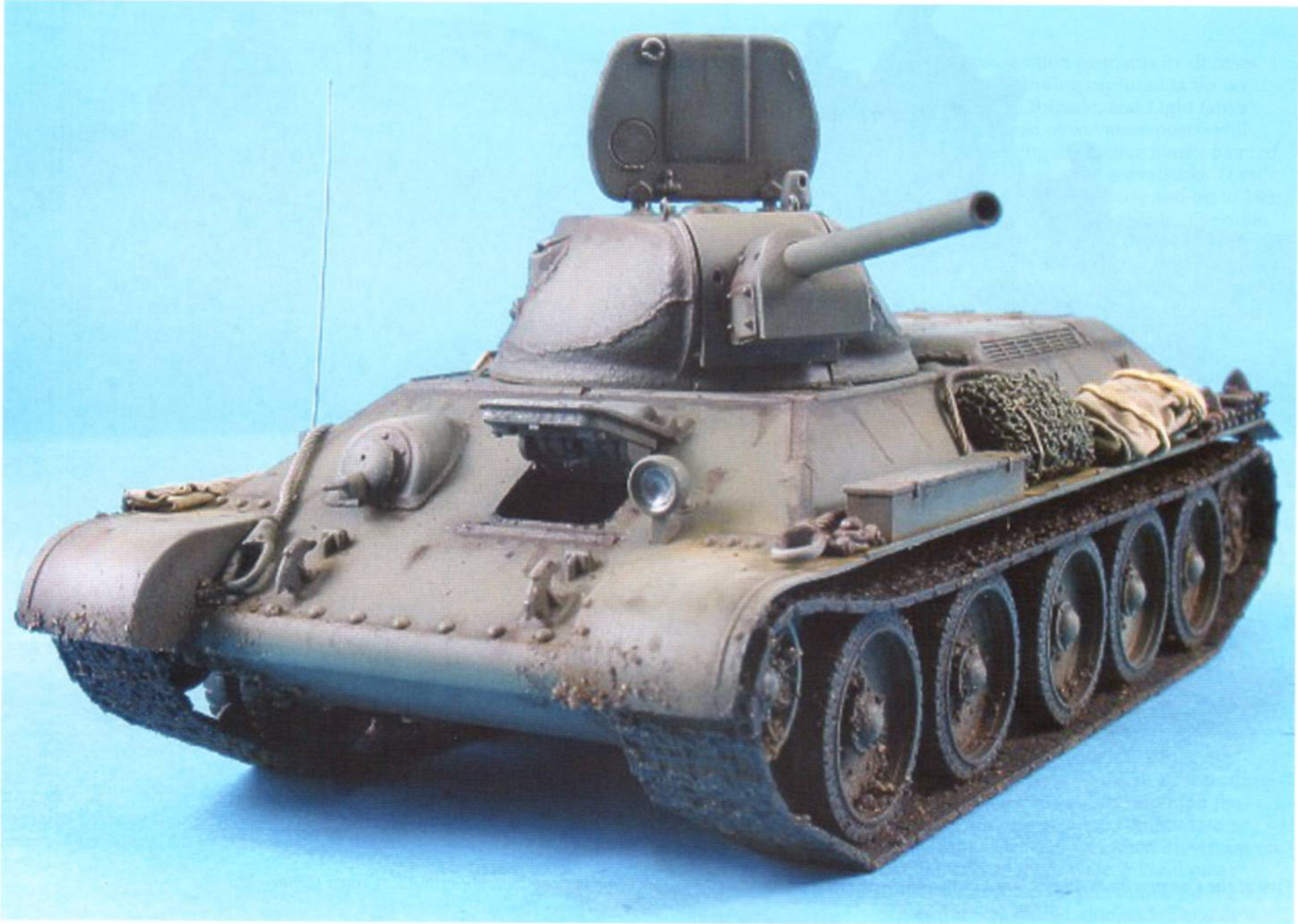


'Quarter Scale' T-34

Jay Laverty builds Tamiya's 1:48 scale kit of the Russian T-34/76 Model 1941

I have to confess to being rather excited when this model appeared and at first glance I was very impressed with what I saw. The mouldings are crisply detailed and it is quickly apparent that this will be a quick build as there are only five sprues in the box, and one of those is duplicated. The wheels are very well done and the bolt detail is delicately replicated and not over scale, which has been a shortcoming of many 1:48 scale armour kits in the past. I was particularly pleased with the tracks as they are of the same high quality as the wheels.

However, as I began to closely inspect the contents I was bitterly disappointed with the choice of a diecast metal hull. If Tamiya want armour modellers to take 1:48 scale seriously they will need to address the issue of separate suspension arms and, while this model fortunately doesn't have them like the Tiger does, separately moulded tools would be nice. This is the 21st century and the shortcuts of the 1970s just won't do anymore I'm afraid.

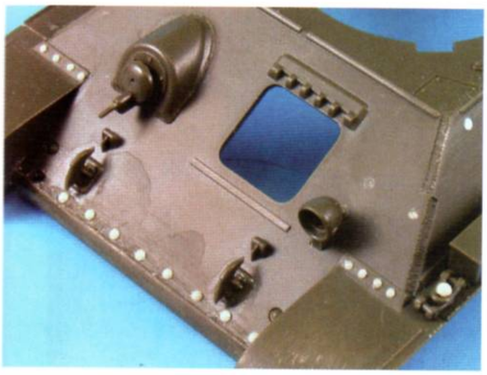
I was also slightly disappointed with the choice of the solid mesh cover for the engine louvres, however, since this part of the model is integral to fitting the upper and lower hulls together I can easily understand the logic behind it and really, in this scale, it's not a problem. Having said all of this, there are some very nice touches to this model and my personal favourite is that focal point of most AFVs - the hollow headlight. There are still models being released in 1:35 scale with solid headlights and in this day and age the practice is really unnecessary.

The cast texture on the turret can only be admired and is encouraging to see this side of things being taken seriously. This will save ages of work and I take my hat off to Tamiya's pattern makers who decided to make this a feature on this kit.

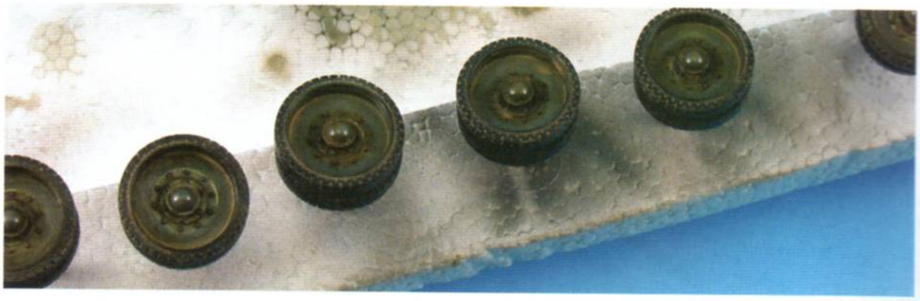
Overall I would rate this model highly even taking the features into account that I personally found disappointing, as I can see already that this will build up into an impressive little model just by looking at the sprues, and as always, Tamiya's name on the box means it will build very easily.

Wheel out the Wheels

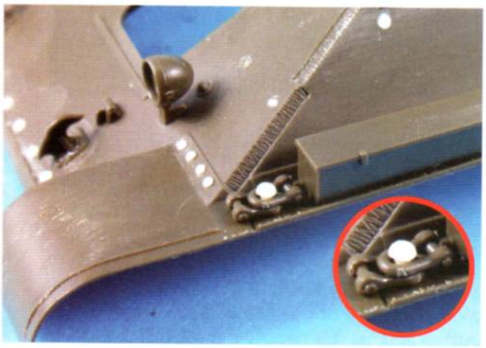
Show me an armour kit that doesn't start with the wheels and the lower hull in the first two sets and I'll give you a fiver! As I mentioned these wheels are nicely done and within minutes I had them sitting on wooden toothpicks waiting for paint. I decided to do my usual method and paint, weather and finish them before fitting them to the hull. I use a length of Styrofoam to fit the wheels on,



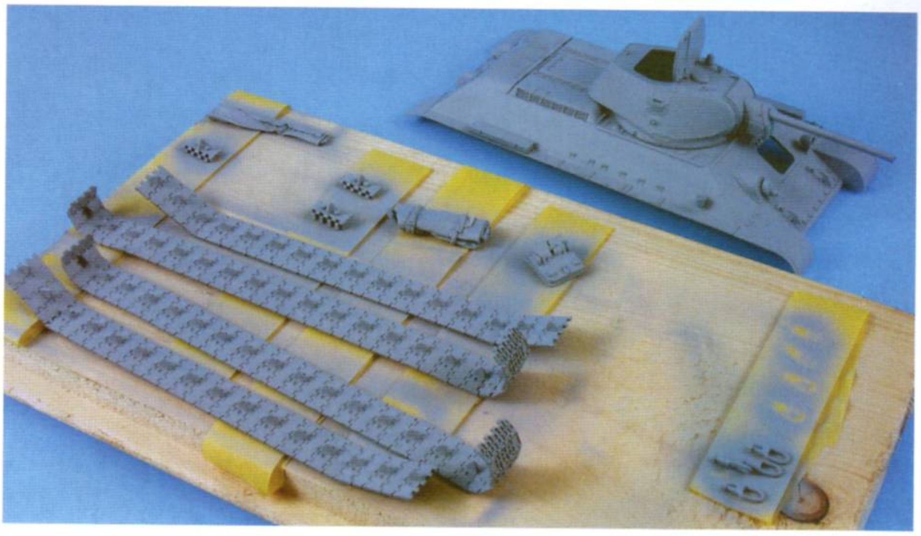
I decided I would add missing details to the glacis plate, such as the bolts and rivets found on most of the reference pictures I have. Hopefully, they will bring the painted model to life.



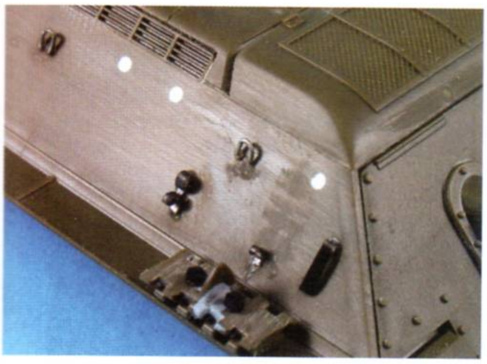
I have found the easiest way to keep all the wheels in place while painting is to use some wooden toothpicks and a length of Styrofoam. Everything is done at once, from priming to weathering.



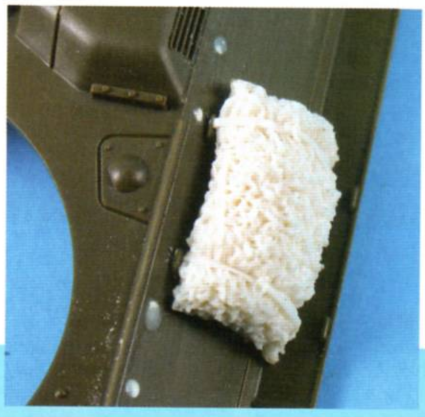
Tamiya doesn't provide the fastening bolt for the towing eyes so Calibre 35 provided an improvized rivet head.

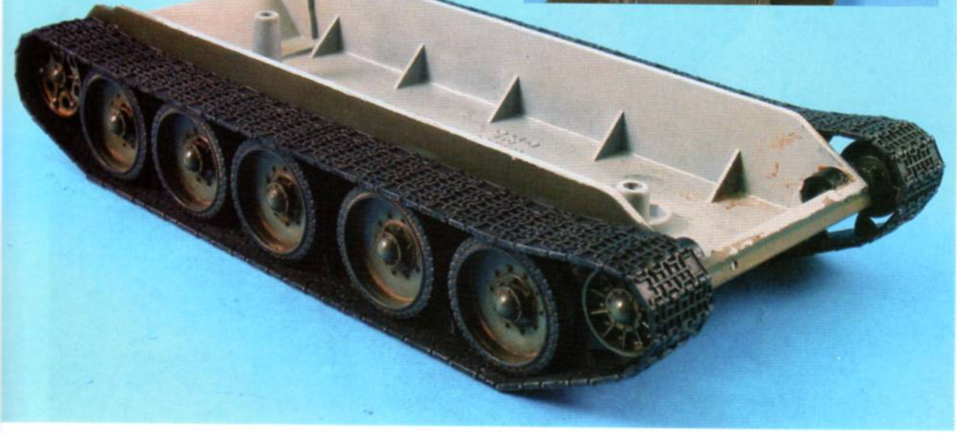


ABOVE: All of the kit's components and sub-assemblies primed and laid out for photography. After some of the larger projects I have worked on recently, it was a pleasant feeling when I very quickly reached this stage of the model. RIGHT: How the exhausts are tooled allows for them to be painted separately from the rest of the model without difficulty. These crocodile clip 'spare hands' are very handy indeed! INSET BELOW: One of the gems I found in my spares box was this 1:72 scale piece of British stowage from CMK. If you look closely at where the straps meet the fastening points on the Tamiya hull, this piece could have been designed for their model!



Crude, but effective. I used some spare etched strip to fabricate fittings for the pioneer tools found on some early variants of this vehicle. In total it took about 10 minutes, but I am confident they will look good once painted.





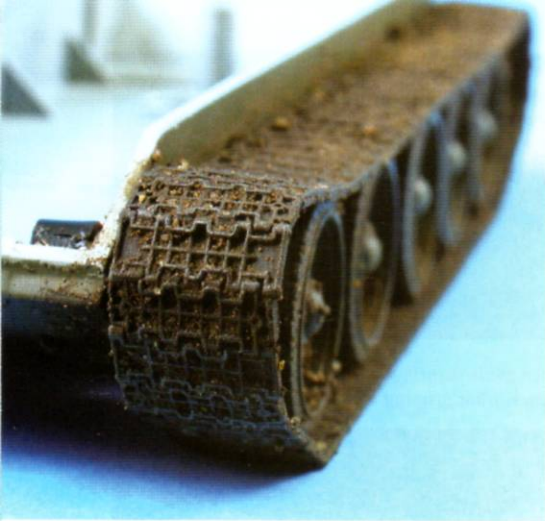
After test-fitting the upper and lower hulls, it was obvious that the fit of the two was sufficiently good to allow me to completely paint and weather the two separately. This was very convenient when it came to the tracks.

which have been impaled on toothpicks cut in half, for painting which keeps them nicely in place without the need for handling.

As the tracks will be a lot easier to paint and weather before the upper hull is fitted, the lower hull has been painted and weathered prior to their attachment. Once in place the wheels will provide the template for the assembly of the track, fixed together prior to test fitting with Tamiya Extra Thin Cement. As the pictures illustrate I made a slight deviation from the instruction sheet here in order to ease the painting process. I didn't fancy painting the individual links and lengths on their own so I have built them up into four sections (two per side). After test fitting them it became apparent that Tamiya has made a major error on this one - or I have! I needed to add two extra links per side on the tracks, therefore, I suggest adding them now. Since writing this, I saw an article by Steve Palffy on Hyperscale where he mentions that he too had the same problem, so I feel that the mistake is more than likely Tamiya's as he is a very reliable builder.

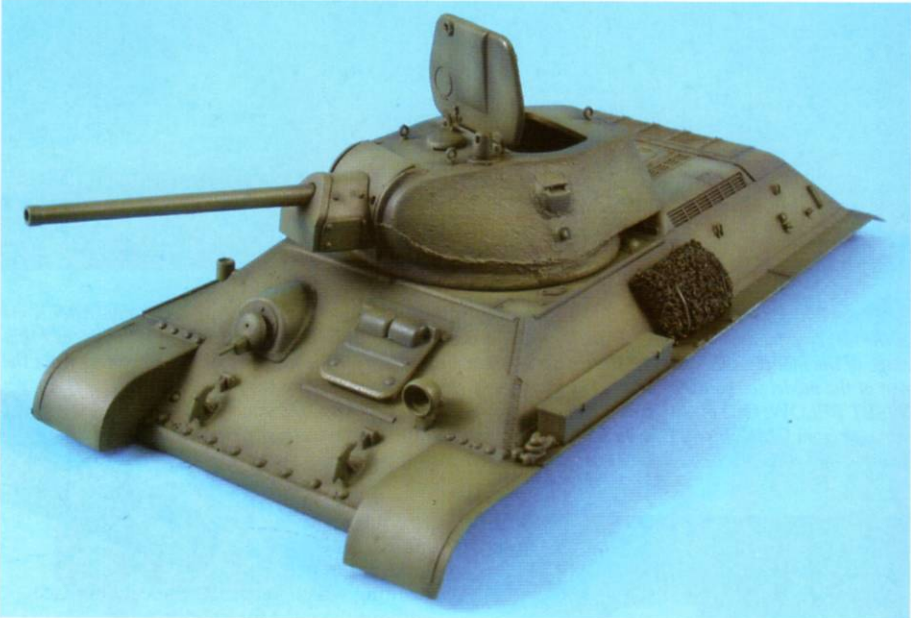
Hull Topics

As I was looking over the upper hull, something just didn't look right. I knew that the addition of the grab handles was something that wasn't too common on the early T-34s and, therefore, the option is open here to leave them off completely, but there was something else that was nagging at me. After looking at the first picture I found of this tank it was

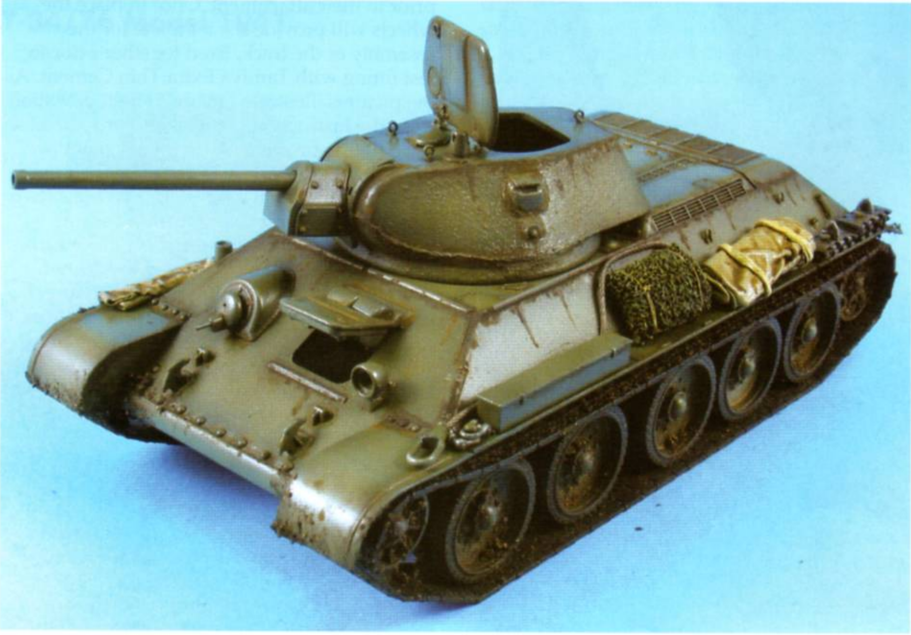


I went out to the garden for some dirt to add to the tracks. Of all of the exotic concoctions I have seen used, for me, natural dirt is still the most convincing and easiest to use.

The upper hull displays the first stages of painting. While it isn't apparent in this photograph, pre-shading will play a major part in the overall appearance of the model combined with the post-shading using white.



The results of the shading is much more apparent here and the work prior to the basic colour coat becomes evident. With patience, the need for 'filters' becomes negligible.



Looking absolutely horrible, this is the model about mid-way through the weathering process. Streaks and grimy build-up have been added using a combination of weathering pigments and artists' oil colours.

plain as day. Tamiya had left off the rivets along the front of the glacis. These aren't difficult to add, as it is simply a matter of using a CMK bolt head template along the hull, drilling locator points and fitting the smallest rivets I had in my condiments tray. While I was at it I decided I would add the rivets on the fenders at the point where they are attached to the hull.

As mentioned earlier, I was mildly disappointed to see that the mesh for the engine cover was solidly moulded, but this is to be expected as it is a feature on all other Tamiya T-34 offerings. However, I was pleased to see that the exhausts were patterned in such a way that they would be very easily fitted after the painting process had been completed.

I added several small details to the hull sides and even one small after-market accessory! Using some scrap lengths of photo-etch metal small details like the tie downs for the pioneer tools were added to the rear of the hull, and two small lengths of fuse wire were shaped into rungs. I was pleased with the work that I did and, considering the paltry amount of time spent on it, it came up very nicely. The rest of the hull construction goes along quite easily, as per any Tamiya kit, and before I knew it I was working on the turret.

Into the Void...

The exterior of the turret is superb. Beautifully rendered cast texture on the sides and the seams cleverly covered up with fitted parts, this looked very promising. The fit of the roof isn't perfect, but is easily repaired with a toothpick and some super glue. However, when it comes to the interior this kit is disappointing, to say the least. I for one love to model my tanks with hatches open, even though I cant paint figures, and it would have been nice to have even the most basic of interior detail. Even just the gun breech would have been nice! But there is nothing. Oh, aside from a tab for a non-existent crew member to stand on. Undeterred and too stubborn for my own good, I fixed the turret hatch in the open position and hopefully no one will go peering deep into the abyss that is my turret and find themselves staring back at themselves.

On the bright side, the gun is a single, moulded affair with a hollowed-out end that requires all of five minutes work. Actually the turret was assembled in about an hour, so top marks there. With all of the construction work completed, aside from the hull halves, the model was ready to be primed then painted.

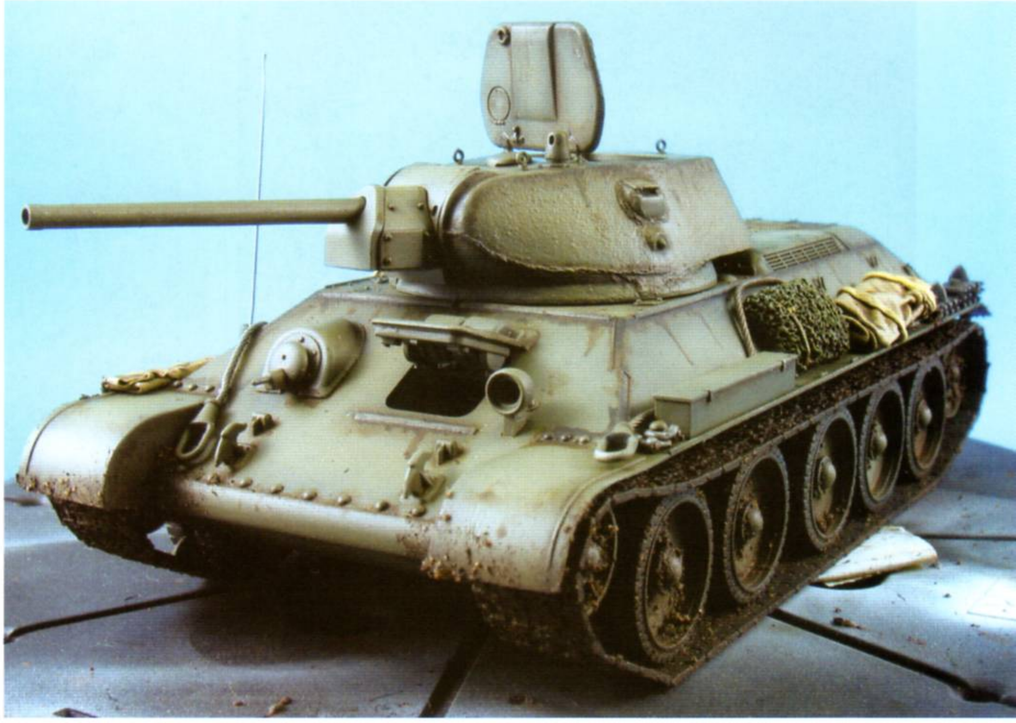
Priming and Painting

I used my favourite and dependable Alclad Grey Microprimer, which dries almost instantaneously, and with a few passes of the ultra fine mist, the model was ready for Xtracolor. I began with flat black as a pre-shade, followed with a 'neat' coat of Xtracolor Russian Green 811. This was followed with several gradually lightened coats, which is all blended in at the end with one final, very thinned, coat of the 'neat' X811. This was subsequently sealed in with a coat of gloss varnish, in preparation for the weathering. Speaking of which...

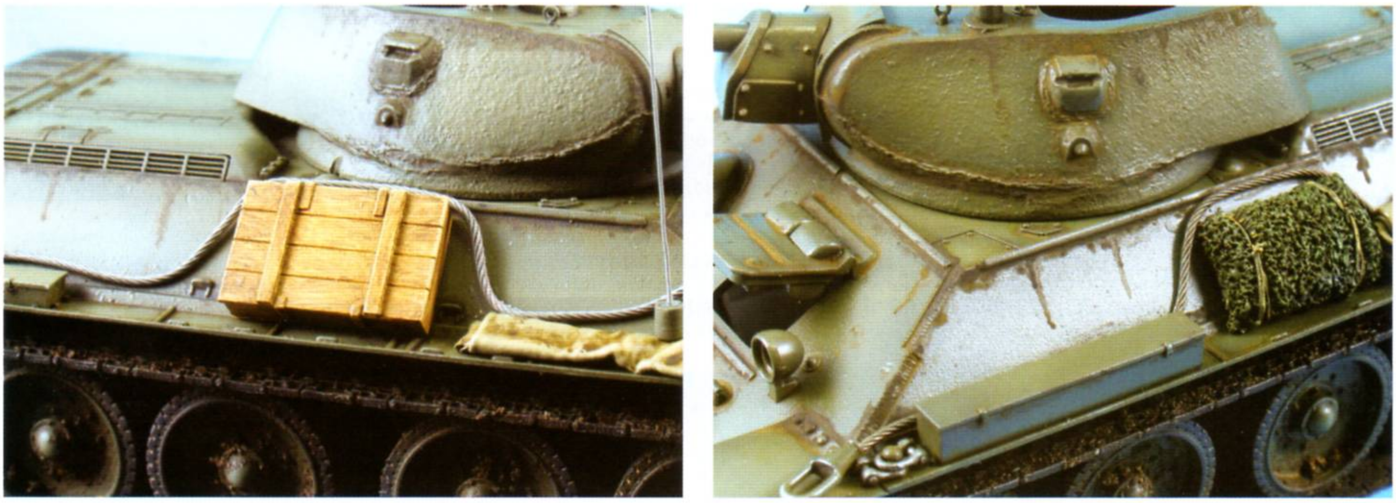
Garden Variety Weathering

My first step in the weathering process was a trip out to the garden to collect some dirt that had been finely ground by my kids playing in it. A strain on their clothes and their mother's nerves, sure, but great for my purposes.

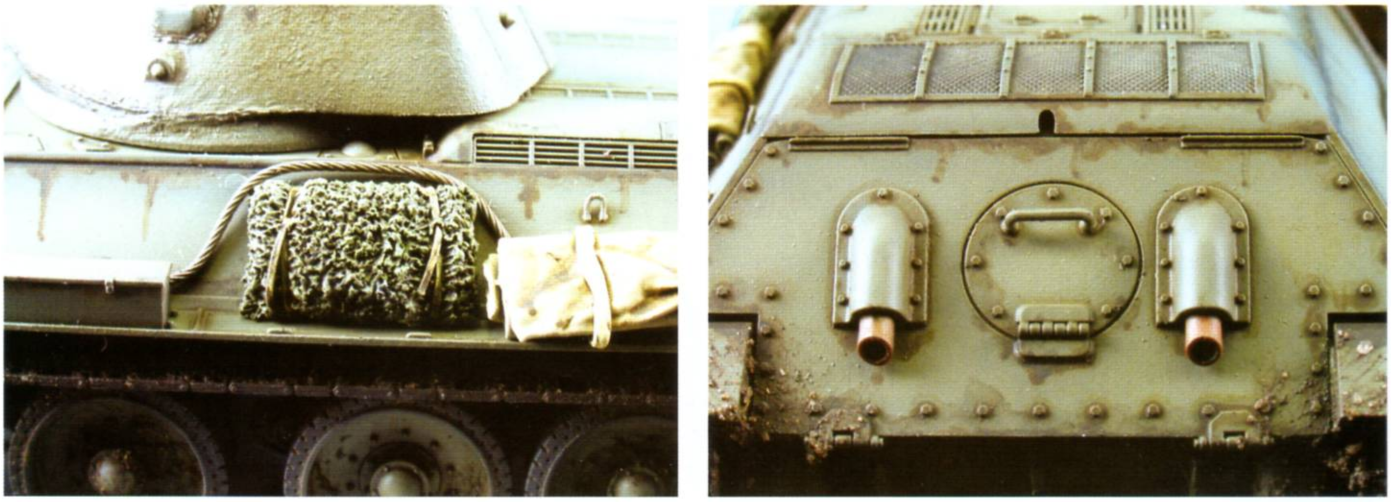
I mixed the readily available dirt with some white glue and some Raw Umber for



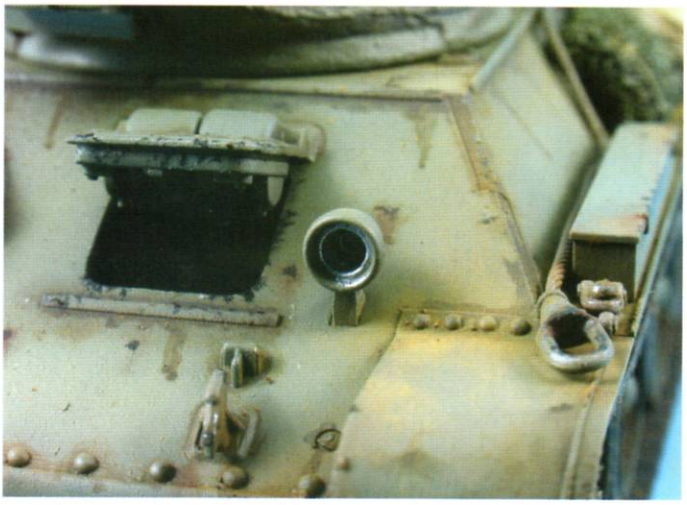
Just before the matt varnish completely dried there were some tense moments as the model gained a 'misty' look. Not to worry though, all will settle in a few hours.

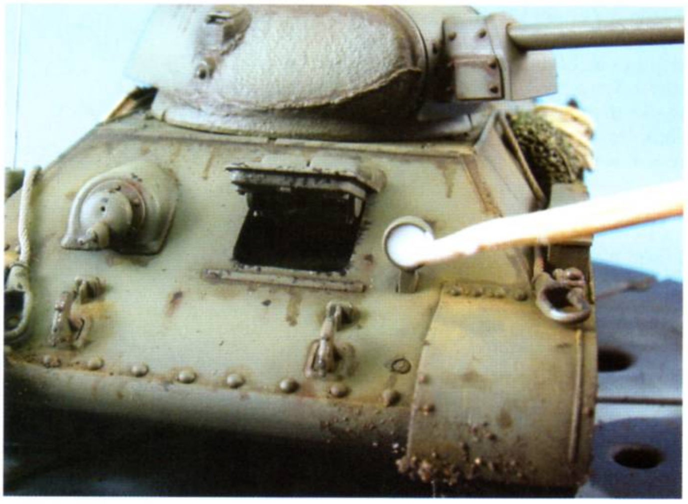


ABOVE LEFT: It took a long time to get to the point where I was satisfied with the appearance of the wooden parts on a kit. I put this down to the age I spent working on the floorboards of my 1:16 scale Schwimmwagen which were quite a task. ABOVE RIGHT: It's obvious that some foresight is needed in order not to become discouraged about how poor the model looked at this stage. A bit of confidence is required to visualize the finished model 'looking decent'.



ABOVE LEFT: That CMK camouflage netting looks pretty good and I still can't get over how well this particular piece has carried over from 1:72 scale. ABOVE RIGHT: With the exhaust pipes in place, the hours spent applying Alclad and dry-brushing several shades of orange and rust have hopefully paid off.





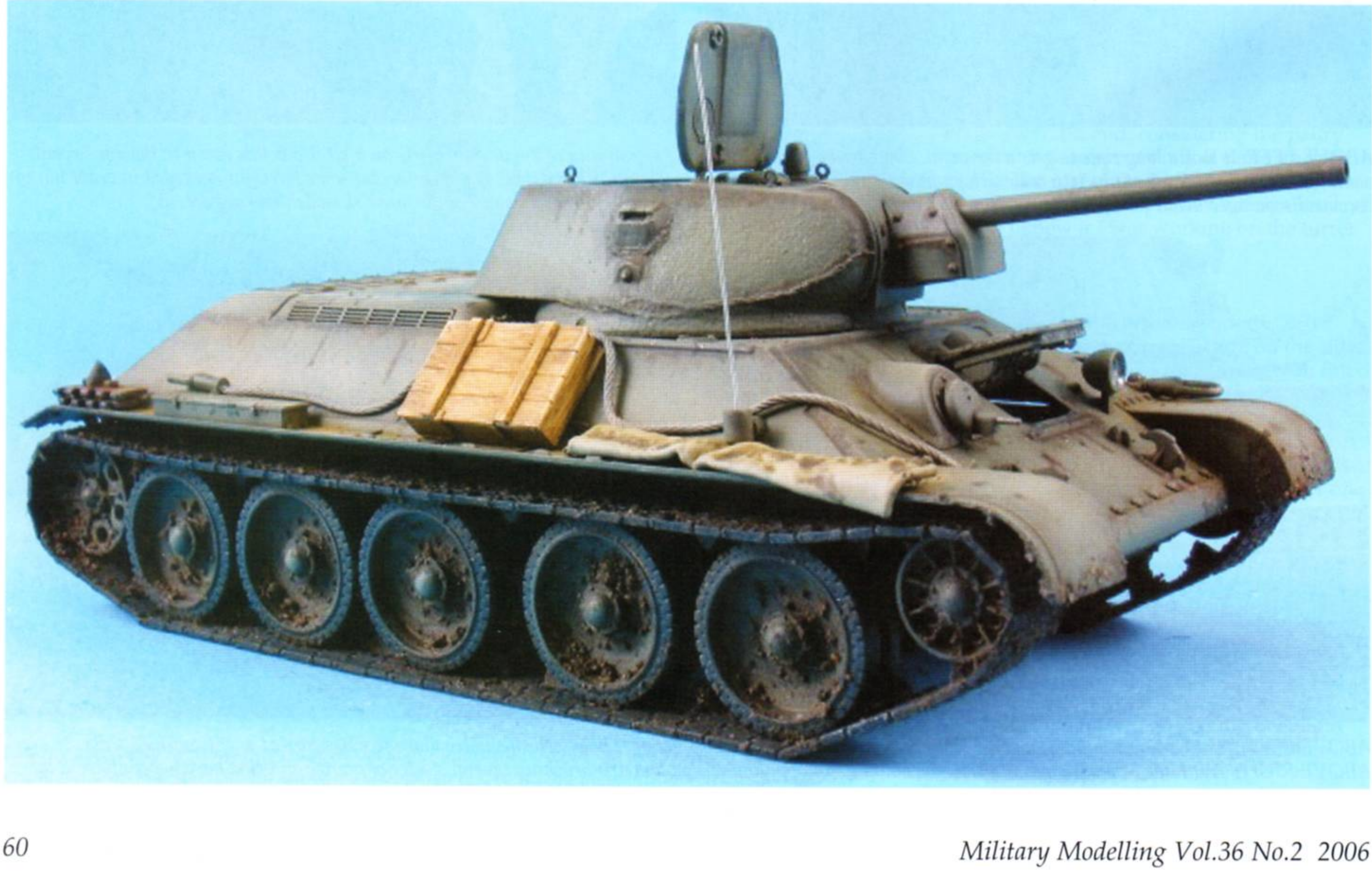
ABOVE LEFT: I brush-painted some Model Master Chrome Silver to the headlight ready for Kristal Kleer to finish off as the lens. My particular pot of Model Master Chrome Silver still soldiers on after so many years that I am going to erect a commemorative shrine to it when it finally expires!
ABOVE RIGHT: Kristal Kleer was applied to the headlight using a toothpick and I hoped, with luck, that it would dry overnight to form the lens. Things, however, didn't go exactly to plan and it would seem that I didn't add enough 'goop' to make it work. Looking directly at the glacis does not do the headlight any favours, but I am very pleased with the result of the streaking and staining. Nobody's perfect!

colour, then applied it to the model with a brush. After allowing the mixture to set overnight the CMK pigments were applied and, for a change, I thought I would mix them with thinners and see how that worked out. The first couple of goes were a bit heavy so I experimented with several different mixtures, and found that only the slightest amounts are required to achieve the maximum effect. Once satisfied I had achieved the look I wanted it was all sealed in using a coat of matt varnish.

And the Verdict is...

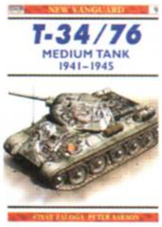
Overall, very good. I was pleased with the results I achieved with this little model, and even though it is a smaller scale, it can result in 'big scale' looks. The only part I was really disappointed with were the tracks. One of the curses of the smaller scales is the fact that elements like the tracks are invariably over scale, and that is definitely the case here. I wish I had spent some time sanding the edges down on the track links, but once again we live and learn. No doubt someone will produce a sets of tracks in resin and this problem will be quickly and easily solved. I also felt that the diecast metal hull was unnecessary, and inconvenient that the suspension arms are cast on. However, this does not take away from the overall pleasure of the build.

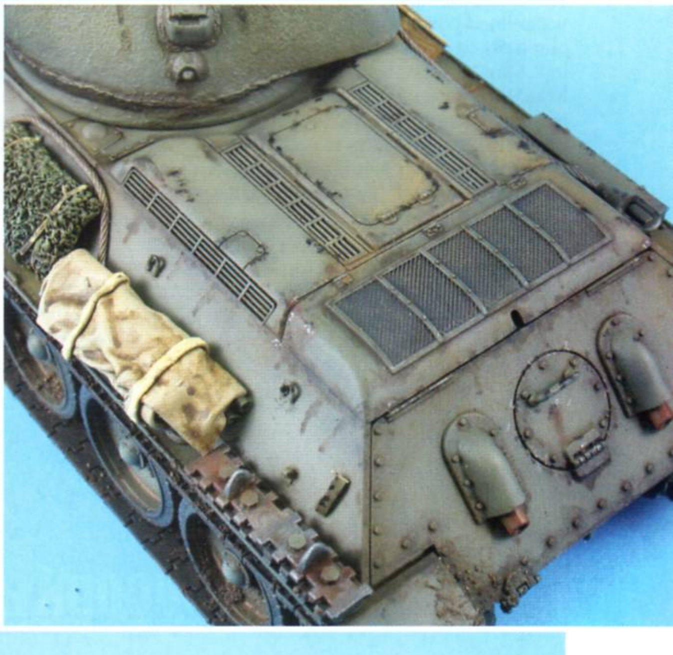
I can wholeheartedly recommend this model for a change and perhaps as a lead into a 'new' scale for armour modellers to work in. As I've mentioned it does need some 'sprucing' up, but basically it is a 'well done' for Tamiya and hopefully, if they keep the releases coming in this scale, they will look at improving the elements that *can* be improved, if they want the scale to be taken seriously. Otherwise it will simply be a side show that aircraft modellers use to compliment their aeroplanes, and we all know how good they are at building armour... ★

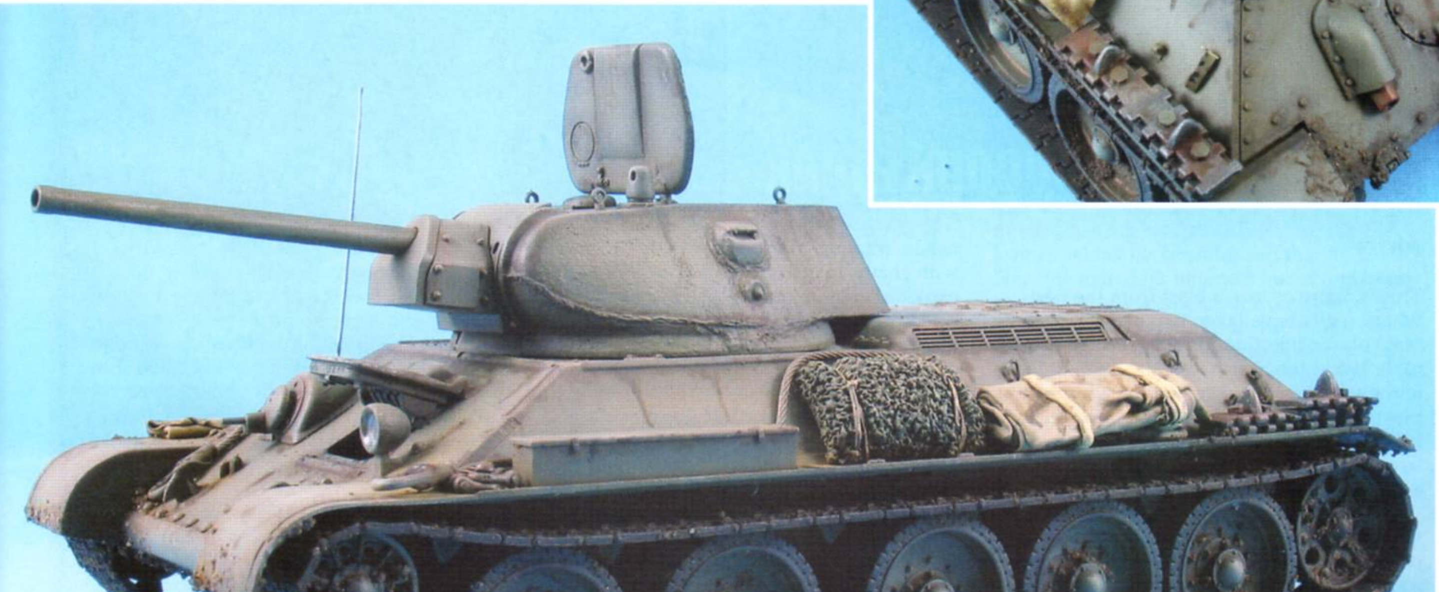


Photographs of the finished 1:48 scale Tamiya T-34 could be taken as a larger 1:35 scale model.

T-34 in action
squadron/signal publications
ARMOR NO. 20


NEW VANGUARD
T-34/76
MEDIUM TANK
1941–1945
STEVE ZALOGA PETER SARSON





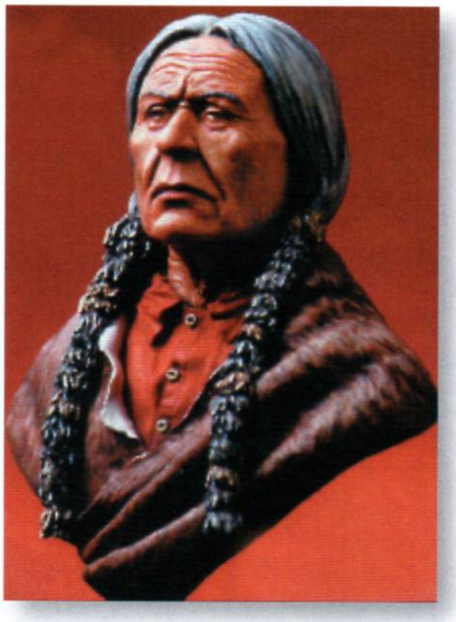
'ATTEN-SHUN!'

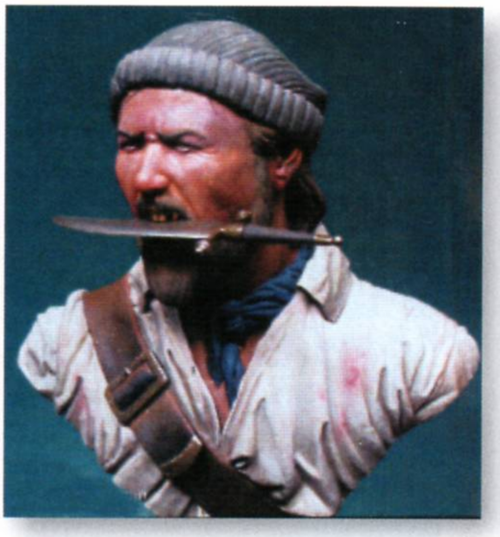
New and recently released products reviewed

● The Editor welcomes product samples for review. Unless a prior arrangement has been made with the Editor review samples WILL NOT be returned. All product samples intended for review in the 'Atten-Shun!' column should be sent to:

The Editor
'Atten-Shun!'
Military Modelling
PO Box 6017
Leighton Buzzard
LU7 2FA

● Tel/fax: 01525 370389
● E-mail: editor@militarymodelling.com





Pagan Art & Miniature

Pagan Art & Miniatures is a new company to our column, based in Solna in Sweden. Two 1:9 scale cast white metal bust kits have been sent for review and these are packed in bubble wrap-lined boxes with painting instructions and a photo of the painted model on the box top. Max Nykvist the man behind Pagan Art & Miniatures tells us that the first kit boxes issued are unsuitable and will be replaced by improved items as soon as possible.

Sculptor of both pieces is Joachim Lindman and the first bust, PAM9B001 is a Quapaw Chief and PAM9B002 'The Buccaneer'. The third release, the kit instruction sheets proclaim will be *Nosferatu* - presumably the early German cinema version of Dracula.

The Quapaw Chief is a one-piece casting which pegs into a small round base on which it appears to be stable and adequately balanced. Painting is straightforward - after cleaning up simply priming and painting a one-piece casting. The Buccaneer, however, is in kit form and shows a design re-think over the Chief. There is the same small circular base, but the head and woollen cap, plus the knife that's intended to be gripped between his teeth, along with the upper torso are supplied as separate items.

Both are very good and show good attention to detail and the white metal castings have retained this, there being only a small, minor and easily filled blow hole in the back of the chief's neck. Otherwise, subjects excepted, these are competently designed and produced 1:9 scale busts and an excellent prelude to what looks like becoming a range of fine miniatures. The prices quoted are in Swedish Kroner.

Ken Jones

Prices: 425SEK (Export price 340SEK)
Pagan Art & Miniatures, Box 2006, SE169 02 Solna, Sweden. Tel: + 46-8-825206.
max@paganart.se http://www.paganart.se

AIRFIX
02321
1:72
CHURCHILL CROCODILE TANK
MODEL KIT • MAQUETTE A MONTER • MODELLBAUSATZ • MAQUETTA PARA MONTAR

AIRFIX
02320
1:72
SHERMAN CRAB TANK
MODEL KIT • MAQUETTE A MONTER • MODELLBAUSATZ • MAQUETTA PARA MONTAR

Airfix

This is, more or less, a blast from the past where Airfix have taken two of their 1:76 scale plastic injection moulded kits of the early 1960s, the Sherman and Churchill tanks and given them an 'upgrade' by adding new plastic kit parts (made in China) and relabelling them as 1:72 scale, producing the kits from the original moulds by Airfix/Heller/Humbrol in France.

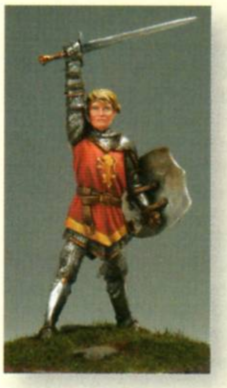
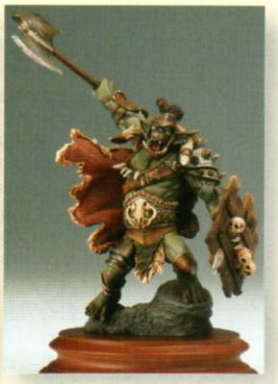
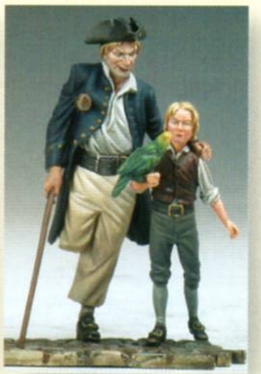
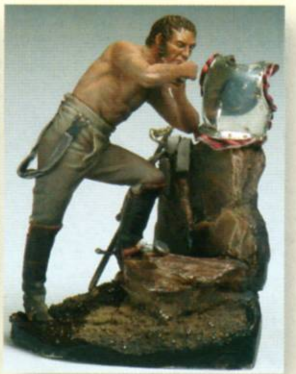
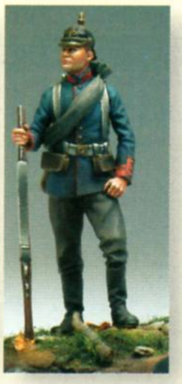
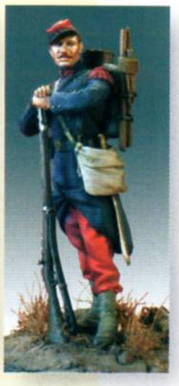
Both kits, along with the German Panther, were first released by Airfix in 1961 and the original basic M4 Sherman is certainly showing its age, but there is surprisingly little flash, the detail is just none-existent or heavy, and not up to what is obvious or demanded by current standards in today's 1:72 scale Dragon or Revell kits. A new set of sprues moulded in light grey has been added so the M4 Sherman so it can be made up as a Crab mine flail (02320). The original flail used a rotating drum powered by the tank, with chains to beat the ground in front to explode mines. In this kit Airfix have replicated the chains with plastic rods, which makes the drum look like a *chevaux de fris* once assembled, although very fine chain could be used to replace the plastic spikes by discerning modellers. The Sherman is moulded in a light green polystyrene plastic and the sprues for the Crab's drum and mounting are in light grey. Transfers are included for a Sherman Crab flail T-148090 of 79th Armoured Division, Operation *Overlord*, Gold Beach, Normandy, France 1944. A little research would reveal other users and thus different markings.

I remember assembling the original Airfix 1:76 scale Churchill in on its release in 1961 and the difficulty in aligning those small roadwheels and springs which always seemed to get pulled out of true when the soft vinyl tracks were fitted. Nothing has changed, and the 'update' on this old stable mate to the Sherman has additional parts added for a fuel trailer to produce the Mark VII 'Crocodile' or flame thrower variant (02321). The parts for the trailer in comparison to the original kit, made in China, show just how more refined the genre has become over the past 40-odd years. Transfers are included for a vehicle described as with 34th Armoured Division 107th Regiment RAC, Operation *Overlord*, Gold Beach, Normandy, France June 1944. The vehicle has the name BRITON and WD No. T251625.

Old hands will view these with a bit of nostalgia and as something on which to improve upon whereas, I fear, a later generation's more serious and discerning modellers in the smaller scales will simply wonder, 'why?'

Ken Jones

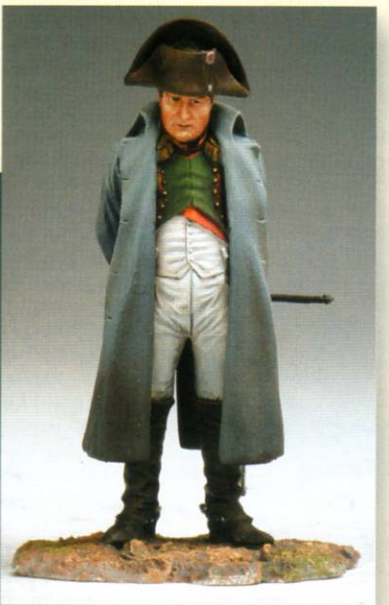
Price: £4.99
Humbrol Ltd., Marfleet, Hull.
Tel: 01482 701191.

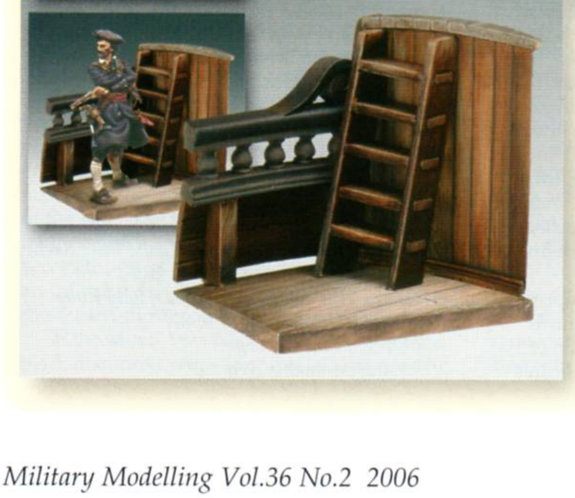







Andrea Miniatures

The latest releases (received by us) from Andrea Miniatures came out last December and except for two items are all miniature white metal figure kits - all 54mm too! The two exceptions is a resin and white metal scenic kit display base - a ship's bulwark and step and a ready assembled and painted white metal figure of Emperor Napoleon Bonaparte of France , in a new 'Ready 2 Show' range.

The 'Ready 2 Show' series is described as, 'offering the collector a wide range of high quality painted models ready to be placed in the showcase. What you have in your hands is not a toy - it's a genuine collectors' item.' It's neatly painted and packed in a blown clear plastic display box mounted on a backing card. A novel touch is that the plastic on the front of the blown box is formed into a disc and thickened to magnifying strength to show a close up of the figure's face. It's very good, but the only problem I would perceive would be the way the figure is secured in the packaging with a twist of plastic-coated wire. Don't try to 'untwist' the wire to get the figure out - snip it from the front, push the ends to the sides and 'drop' the figure out - being careful not to bend the riding crop or cane held behind the back - as I did! If this happens to the soft metal and it bends, the paint peals off. Easily touched up, granted, but just think before you eagerly remove the figure from the packaging. A well-produced and painted figure, produced in China, it looks good in a display cabinet. I've seen a lot worse passed off and sold as a 'display model' figure, but the price of course will reflect the labour intensive production of such a figure, albeit from China's vast production machine that can make anything in vast quantities.





AS-012 is the Ship's Bulwark and Step - a cast polyurethane resin and white metal kit of parts to produce a maritime scenic display base. Example figures in place on the box top pictures are Andrea's Admiral Horatio Nelson, a pirate and the latest 'Treasure Island' pair and, as this Bulwark and Step owes more to 'Hollywood Pirate' than period British warship, with its fancy scrollwork and balustrade type rail, I'd think carefully before adding the figure. Only the set of steps is cast in white metal, the remainder is moulded resin. It costs £15.45 + £1 p&p.

Two 54mm fantasy figures are on release; Narnia-03, price £15.45 + 75p p&p, is Peter from C.S. Lewis's classic tale, *The Lion, The Witch and The Wardrobe* - also the subject of a current Walt Disney motion picture, 'The Chronicles of Narnia'. The figure of Peter holds his sword aloft and is more or less clad in early Medieval style, arm and leg plate armour protection, mail and a short surcoat, but forget convention and just paint it us as it's intended to be.

Volgor - well what can you say about this ugly brute! Volgor (WS-02 £21.35 + 50p p&p) is a 'The Skull Hunter' from Andrea's War Lord Saga. He wields a massive double-headed axe and carries a planked wooden shield, which looks like it's a portion of someone's garden fence he's hacked away when passing and then decorated it with skulls. Anyone who likes to paint fantasy figures will love it.

'Treasure Island, c.1700' (SG-F112 £21.35 + 50p p&p) in Andrea's 'Series General' is a two-figure kit of two of Robert Louis Stevenson's character's classic work Treasure Island - the one-legged rogue John Silver and Jim Hawkins as they may have appeared as cook and cabin boy on the *Hispaniola* with Squire Trelawny and Captain Smollet in search of treasure. Jim holds a parrot and 'Long John' rests a guarding hand on his shoulder. I can almost hear Robert Newton's 'Ha-harrh Jim Lad!' when he played (some say over-played) the role of Silver in the Disney film of the same name. The Andrea bulwark display base mentioned earlier is ideal for this one.

Based on fact, rather than fiction, is 'Cuirassier's Toilette 1806' (S7-F32 £16.45 + 50p p&p) a 54mm figure of a French Cuirassier shaving himself using his polished cuirass as a shaving mirror. The display base and other accoutrements are included in the box and make for an inspired model - a good idea for a 'different' pose. I like it.

The Franco Prussian War, especially the year 1870 has captured the imagination of Andrea designers with the release of two appropriate figures - SG-F113 Prussian Infantryman (£15.15 + 50p p&p) and SG-F114 French Infantryman 1870 (£16.45 + 50p p&p). Both are straight up and down poses, and would look good displayed together as the infantry protagonists of that conflict - the more soberly garbed Prussian, wearing the leather helmet (*pickelhaube*) and the Frenchman in dark blue coat and red trousers and *kepi*. The war saw the introduction of bolt-action rifles with needle fire cartridges - the Prussians used the Dreyse system whereas the French used the Chassepot system - and both figures have nicely-formed miniatures of these appropriate infantry shoulder arms used during that conflict.

Andrea kits, paints and accessories are available in the UK from, Historex Agents, Wellington House, 157 Snargate Street, Dover, Kent CT17 9BZ. Tel: 01304 206720. Fax: 01304 204528.
sales@historex-agents.co.uk
www.historexagents.com

Ken Jones

Prices in text

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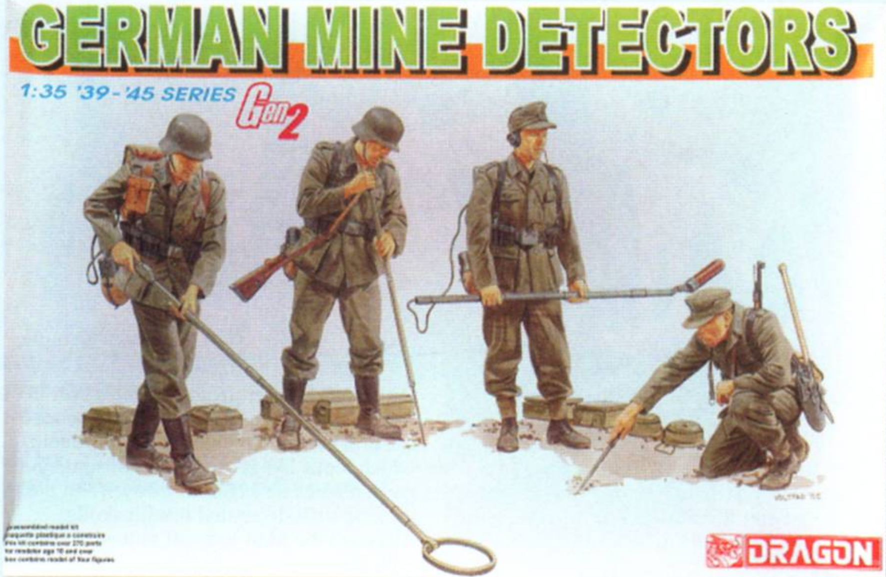
www.andrea-miniatures.com



Dragon Models Ltd

There is one of the many corollaries to "Murphy's Law" that if you are moving well cross country then you are probably in a mine field. Mines are dangerous obstacles to both the attacker and defender, and to this day cause many more casualties both during and after a war than most people would think. To that end, all nations have concentrated on mine clearing using the best technology that they can produce. The Germans were no different, and tales of the British and Soviets being particularly generous and lethal with the use of mines are common. As a result, the engineers (German *Pionieren*) had to clear minefields to provide for free movement and access routes.

DML has now provided a 1:35 scale kit of such personnel, ('39-'45 Series Kit Number 6280) with two mine detector operators and two soldiers using more common if primitive means. Not only does the kit come with the mine detection equipment, it also comes with four different types of Soviet mines (TDM, T-IV, PZM and Model 1938) for them to have discovered the right way (not much sense of making a kit if they found them the wrong way!) I am no expert on German engineer equipment, but the systems provided appear to be the Model 1939 Mine Detector Rod, an Aachen 40 Mine Detecting Coil, the Wien (Vienna) Model 1941 Mine Detector, and the old fashioned bayonet in the ground.

The Mine Detector Rod operator has the assembled rod with probe and is operating in textbook fashion, sticking into the ground in front of him. The system is supposed to let him know what he has struck by the fact that it is an aluminium tube and the sound resonates. The Aachen 40 is a coil on a long rod, familiar to most people who have seen similar ones in operation, with the operator using an electronics backpack (receiver and batteries) and providing an aural signal via headsets. The Wien 41 is a detector shaped like a sausage on the end of a sectional pole, with an electronics pack worn by the operator and providing an audible signal via headsets.

All four figures come with the complete pantheon of DML's standard kit for German figures - GA and GB accessory sprues, and one WA weapons sprue with two *Kar 98K* rifles and ammunition. The figures and mine detection equipment come on two separate sprues. They also come with a set of brass belt buckles, epaulettes, and awards.

As is most common with DML figures, the box art is by Ron Volstad and a great help to painting up the figures. Overall this set will look great with the DML engineer half-track (no. 6223) and compliment it greatly. Recommended for all German and 'picks and shovels' fans. Thanks to Freddie Leung for the review sample. Dragon kits are imported into the UK by The Hobby Company Ltd., Garforth Place, Knoll Hill, Milton Keynes MK5 8PH. Tel: 01908 605686. Fax: 01908 605666. sales@hobbyco.net enquiries@hobbyco.net

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Price: £8.99

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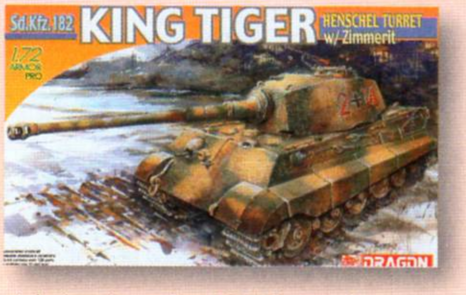
Dragon Models Ltd

Ah, the Germans: only they would come up with a concrete paste to apply to their tanks and big self-propelled guns to prevent enemy soldiers or partisans from using 'sticky bombs' to blow them up. This paste, *zimmerit* was found in many places and used for about 18 months before the Germans gave up on it. But ask nearly any German late war armour modeller about what he probably dislikes most and a good portion will say 'putting on the *zimmerit*,' even more so when it is a small scale kit of the tank. Up until now many options have been tried in 1:35 scale, such as etched brass sheets, thin resin sheets, soldering irons with special tips, or an appliqué paste using engraving tools or special spatulas. All take time and all have their backers, but the bottom line is that the modeller has to do this himself.

Italeri made a brave effort about 10 years ago of making kits of a Tiger I and a Panther in 1:35 scale with appliqué styrene *zimmerit* panels, but it was ultimately unsuccessful. While the shortcomings of the kits themselves are a moot point, the main problem was that if the appliqués were not used the model was underscale, and if they were, it looked, well, like stuck-on styrene panels.



Now, for the first time, *somebody* has offered a kit with the *zimmerit* moulded right into the surface. DML has used its 'slide moulding' techniques to provide a new 1:72 scale kit of their Tiger II with Henschel turret (which came out as kit number 7246 in July 2004) to replace all of the major panels and assemblies with new ones, all with the *zimmerit* in place as 'Armor Pro Series, Kit No.7240; SdKfz 182 King Tiger Henschel Turret with Zimmerit.' There is only one appliqué part, the lower glacis (part E2), and the rest is totally integral. This covers the upper hull (F1), turret (F8), turret face (F7), rear hatch (F6), mantlet (B20),and rear plate (F4). All of the *zimmerit* is in scale and very finely done – it definitely screams out 'dry-brush me!'

The rest of the kit is a 'product-improved' version of 7246, this time with DS plastic track instead of black vinyl and other upgrades to individual parts. Brass grilles are included for the engine deck as well, but only moulded plastic tow cable assemblies are included.

Markings and painting directions are included for six different tanks: *s.Pz.Abt. 101*, Belgium 1944; *s.Pz.Abt. 506*, Andler, 1944; *s.Pz.Abt. 501*, Germany, 1944; *s.Pz.Abt. 501*, Eastern Front, 1944; *s.Pz.Abt. 503*, Hungary, 1945; and *s.Pz.Abt. 506*, Germany 1945. All but the one in Hungary are in three-colour schemes, with that one being in whitewash winter camouflage.

Overall this should be a very popular kit with modellers that do not want to mess around with applying *zimmerit*, and it is amazing to me that it took this long before somebody solved the problem!

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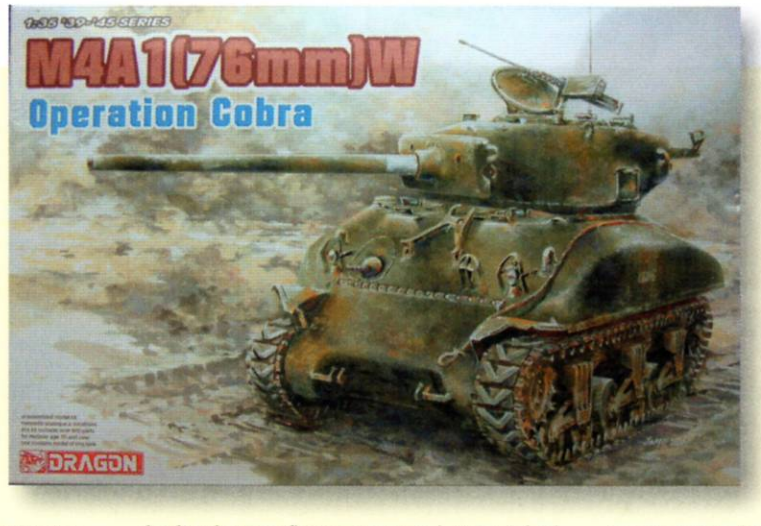

Occasionally as modellers we tend to fixate on one single tank of one type of one production series or run. The early model M4A1 'Wet Stowage' with 76mm gun and the new T23-based turret as used by the 3rd Armored Division's 32nd Armored Regiment is one of those vehicles.

I became interested in it while researching the top scoring tanker of 3AD, SSG Lafayette G. Pool. He originally deployed to France with an M4 or M4A1, which was knocked out during his first day in combat by five hits from *Panzerfausts*, one of which proved fatal to the tank. Due to the surprising failure of the US 75mm guns to penetrate German tanks, a call was made to send over the new 76mm armed tanks as replacements. Pool received one of the first 102 tanks sent over in July 1944 as a replacement. Being in Item Company, 3rd Battalion, 32nd Armor, he gave the tank an I name – 'In the Mood.' Pool's crew included: Corporal Willis Oller, gunner; T/5 Delbert Boggs, loader; T/5 Wilbert 'Bunny' Richards, driver; and PFC Bertrand Close, assistant driver. This crew served together from early July 1944 until 19th September 1944, when Boggs was pulled out of the crew and sent home as his brother had become missing in action (think of *Saving Private Ryan*.) His replacement, PFC Paul King, was killed later that same day in a firefight with either a Panther or an antitank gun that knocked out 'In the Mood' and wounded both Oller and Pool, with the latter eventually losing his right leg due to injuries.

But during their 84 days in combat, Pool's 'In the Mood' and its crew knocked out 258 enemy vehicles, including at least four Panther tanks, an entire company of *SS Panzergrenadiers* mounted in *SdKfz 251* half-tracks, as well as capturing 250 Germans and killing 1,200. His tank was responsible for the near total destruction of the German LXXIV Corps headquarters during its attempt to escape encirclement, fighting a running gun battle with the Germans while chasing them along a road for more than 15 kilometres. 'In the Mood' was the 'point' or lead tank 21 times during its short combat career.

After years of searching and some good luck, Steve Zaloga, Kurt Laughlin, Charles Lemons and I managed to isolate three photos of the actual 'In the Mood' in action during 1944 in France and Belgium. 'In the Mood' was an early 76mm M4A1 with the M1 gun (e.g. no muzzle brake or threading), the T48 rubber chevron tracks common to all 3AD medium tank based vehicles, the 'solid' driver tooth ring, the 'solid' road wheels, straight-topped suspension bogies with riser blocks for the return rollers, the 'spoked' idler, the rear engine exhaust deflector grille, and the use of both the vision cupola for the commander and the older 'split hatch' ring mount for the loader/antiaircraft machine gunner. There are no remaining skirt mountings on the sides of the hull. The tank also had the left side of its travel lock shot away and a scar left across the front of the driver's position by an unlucky *PaK 40* (Oller didn't miss with the return shot!)

'In the Mood' was painted Olive Drab with black disruptive stripes per the 1st Army standardized camouflage recommendations. It had no frontal bumper codes nor the previously used yellow turret codes (as it was a replacement it does not appear to have ever carried them), the name in white centred under the turret on each side, and the serial number USA 3070713-S (for radio suppressed ignition harness) on the rear sides. The tank did carry the 'circled star' marking on top of the front of the turret. It is assumed that the tank, as with most other 3AD tanks, did carry bumper codes on the rear, which as the platoon sergeant for 3rd Platoon, Item Company would have been 3 32 and I-34. (The Patton Museum has a broadside photo of this tank, which clearly shows the above mentioned details; the other clear photo of the tank is on the top of page 30 of Steve Zaloga's Concord book 7036, *The Sherman at War (2): The US Army in the European Theater 1944-1945.* Here one can clearly see Pool and Oller as well as Bert Close and just the top of Richards' head, as well as the missing left 'hook' of the travel lock.

DML has now released the latest 1:35 scale member of their Sherman family, ('39-'45 Series Kit Number 6083; M4A1(76)W Operation *Cobra*) and one of the options in this kit is Pool's 'In the Mood.' Before going any further, note that *fully half* of the parts in the box are not used with this kit! This is due to the use of a number of sprues from the previous Sherman releases by DML.

The kit still shares some of its architecture with the 31-year-old Italeri kit, but it also corrects or replaces most of the obsolete or wrong parts of that kit. The most obviously egregious one, the 'stepped' barrel, has been replaced by an aluminium one or a styrene one with muzzle brake. The turret is based on the moulds used for the new M4A3 kits from last year, but with even further refinement and the casting number. The hull is a totally new moulding, and comes with the early control compartment vent (a U-shaped trench between the front hatches vice the cover of the later models). There is a texturing to both the hull and turret which is a bit exaggerated, but nothing objectionable for most people.

The new suspension is much better than the previous VVSS efforts and is dead on for this particular series of tanks – straight return roller mount with 'pillow' block for raising it. The road wheels are the newer 'two-piece' ones with fronts and backs, but curiously the idlers are the 'solid' type but with no backing. (Note as listed above for 'In the Mood' they will have to be replaced with 'spoked' idlers from the parts box.) The track guards (parts V6) are a bit on the heavy side – considering how much DML uses preformed brass parts, I'm surprised they don't make these out of brass as well, rather than the heavy plastic ones. (For later models, the older VVSS suspension with the upswept return roller mounts are included. Most of the rest of the parts, less the tools which still show a case of Italeri 'anaemia', are well done and of recent vintage, and the machine guns are all 'slide moulded' with hollow bores. There are a number of optional bits too, such as different engine deck covers – with or without a filler port. Since most of the ones that are in photos are covered with canvas, kit or just plain junk, I do not know which is correct and which is not for 'In the Mood.' The engine exhaust deflector grille (part J1) is solid, unlike its Italeri predecessor; but it is closer to scale thickness, and the former one had ejection pin marks in it that were virtually impossible to remove.

Other standard bits include clear plastic for all of the periscopes and vision blocks, a choice of etched brass or styrene guards and details, and two turned brass 76mm rounds for the model. The engine compartment deck may be displayed open or closed, but as there is no engine (!) I guess it is only for the advanced modeller so that he does not have to cut and replace parts.

One thing I know many modellers were hoping was that DML would break down and provide a set of DS plastic single-piece tracks for this kit. No such luck: it comes with the British steel chevron tracks with replacement T48 rubber chevron links and optional extended end connectors. These are very accurate, but have turned out to be the single most hated part of the DML Sherman kits by many people as it can take up to 15 hours to prepare, assemble and install them.

A total of five different marking options are included: an all-Olive Drab Polish 1st Armoured Division tank, Holland 1944; and four different black and OD tanks – unknown, 2AD, France 1944; 'F' Company 33rd Armored Regiment, 3AD, Belgium 1944; 'D' Company 66th Armored Regiment, 2AD, France 1944; and of course, 'In the Mood', 'I' Company 32nd Armored Regiment 3AD France 1944. (It's sort of a shame that the kit did not come with a Culin device for the 2AD tanks, to provide different options.)

The one thing I must caution buyers of this kit is that, like many of its fellow DML kits, once you take the parts sprues out of the box it is nearly impossible to get them all back in! Overall this is a super effort, and contrary to some of the 'experten' on various Websites it really captures the feel of the prototype.

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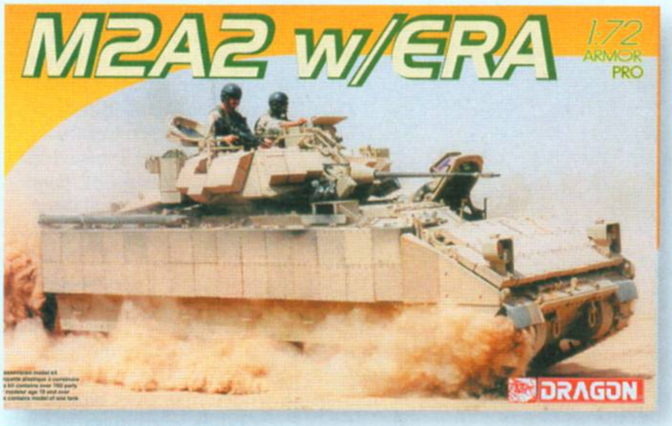

Dragon Models Ltd

More than 15 years ago the US Army gave consideration to mounting explosive reactive armour (ERA) on the Bradley series of armoured infantry fighting vehicles for self-protection. The Israelis had demonstrated its effectiveness as well as the Soviets had adopted *Kontakt* protection - which they dubbed 'dynamic protection', for their own armoured vehicles. But even though the M2A2 and M3A2 Bradley fighting vehicles went into production, proving themselves on Operation *Desert Storm*, the decision to actually produce the suites of armour was deferred.

Fast forward to Operation *Iraqi Freedom*, where for the first time US forces came up against massive numbers of hand-held antitank weapons used at point-blank range. The results were a few knocked out M1A1 Abrams tanks as well as many Bradleys and lighter vehicles disabled. Due to the problems with catastrophic explosions in a Bradley (the inside of the rear of the vehicle carries a great deal of 25mm, 7.62mm and TOW ammunition, plus fuel) the US Army finally decided to field its ERA protection for use in Iraq.

The armour is quite effective, and prevents penetration of the interior of the vehicle or at least minimizes it to prevent injuries to crew members as well as denotation of stowed ammunition. For those not familiar with reactive armour, it uses an explosion and moving steel plates to deform the jet of molten metal formed by a cumulative effects warhead (HEAT) to prevent it forming correctly and penetrating the armour protection of a vehicle. Based on the vehicle and the munition, it can be up to 100% effective.

DML has now offered the latest version of the M2A2 in 1:72 scale with a reactive armour fit (Armor Pro Kit No. 7298). This is an improved version of their earlier M2A2 ODS kit (number 7247) and provides more parts and better rendering. While they have simplified the array down to only seven parts, due to close fits and the conformal fit of the boxes on the actual vehicle this really isn't objectionable, and does prevent the modeller from having to mount 90 or so boxes of around 2 x 2 mm! The model can be built as either a straight M2A2 ODS (upgraded M2A2 with lessons learned from *Desert Storm*) or an M2A2 with ERA. Different parts and components are provided for each one, so you will have to pay close attention to the very busy direction sheet.

This kit is one of the few kits where you do have to use the etched brass, as the mounts are provided for the turret ERA array and no styrene alternative comes with the kit. No interior is provided, but four of the six hatches may be positioned either open or shut (driver's, commander's, missile reload, and rear access ramp.) Tracks are DS plastic as are the keepers for the wheels, the mud flaps, and the antiaircraft sight mount and arm on the turret roof.

Cartograf decals are provided along with four recommended schemes: 1-18 Infantry, 1st ID, Tikrit 2004; 2-7 Infantry, 3rd ID, Baghdad 2004; 1-26 Infantry, 1st ID, Balad 2004; and 1-8 Infantry, 4th ID, Samarrah, 2003.

Overall this is a very nice kit with more options, but it may produce confusion to some modellers due to the plethora of other Bradley kits DML has offered. That would be a shame, as this is the best of the bunch.

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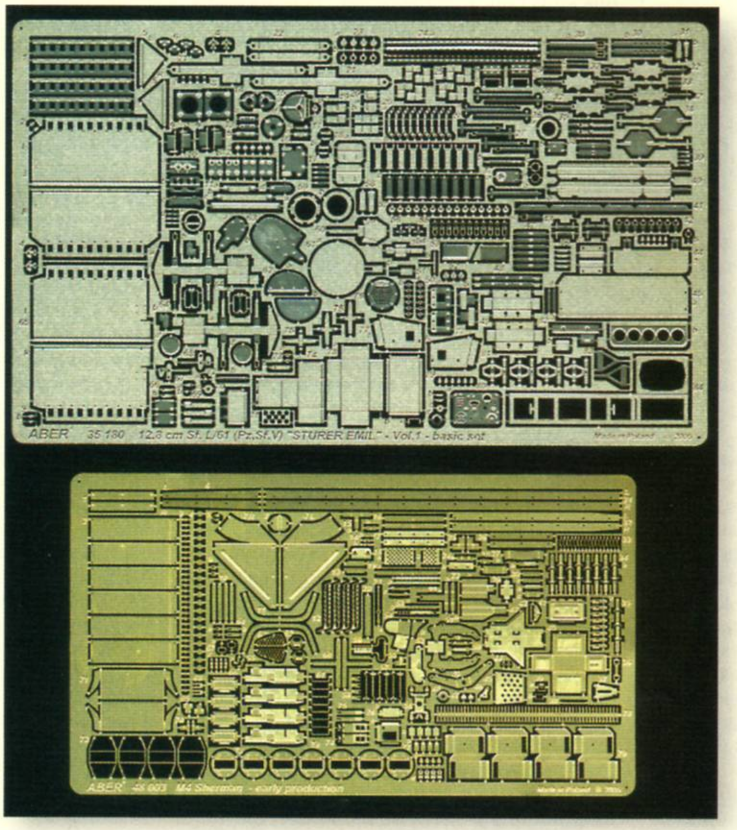
ABER

Produced in Poland, ABER photo-etched brass and nickel steel is, perhaps, the best available to the military modeller. The latest releases have come our way direct and offer some interesting detail/replacement parts for injection moulded plastic kits from the World's top manufacturers.

ABER have gone 'forty-eighth' at last with their sights firmly on Tamiya's 1:48 scale range of kits with 48003 - parts for the M4 Sherman Early Production variant. This will certainly dress up the kit, but be prepared for some very tiny and fine photo-etched bits to remove from the fret. Full fitting instructions are, of course, included as in all ABER sets.

'German Tool Holders - Early Used up to 1943' have been produced for 1:25 scale kits - not a popular scale but there are one or two about from Tamiya and Academy especially. This is the first from ABER item no. 25001.


ABER 35 180 12.8 cm Sf. L/61 (Pz.Sf.V) "STURER EMIL" - Vol.1 - basic set
Made in Poland
ABER 48 003 M4 Sherman - early production
Made in Poland

For 1:35 scale 35A107 has side skirts for Dragon's *SdKfz 171 Panther Ausf D* and *Ausf A.* (35A107) with not only the plates but the brackets to hang them on in prototypical manner.

Trumpeter's 1:35 scale *12.8cm Sf. L/61 (PzSf.V) Sturer Emil* kit no. 00350 gets the ABER detail treatment with 35180, which is Vol.1 the basic set. The Trumpeter kit is a bit 'bare' and will respond well to this set of add on photo-etched details. There's even a tiny clear film with printed dials etc., for the radio set. Finally, six grilles for the engine vents on Dragon's 1:35 scale Porsche Tiger are ABER fret G17, and there are two sets of railings for 1:200 scale German WW2 ships (10) and 1:700 scale railings for Japanese WW2 ships (06).

ABER products are available in the UK from Historex Agents, Wellington House, 157 Snargate Street, Dover, Kent CT17 9BZ. Tel: 01304 206720. Fax: 01304 204528.
sales@historex-agents.co.uk
www.historexagents.com

Ken Jones

Prices in UK from Historex

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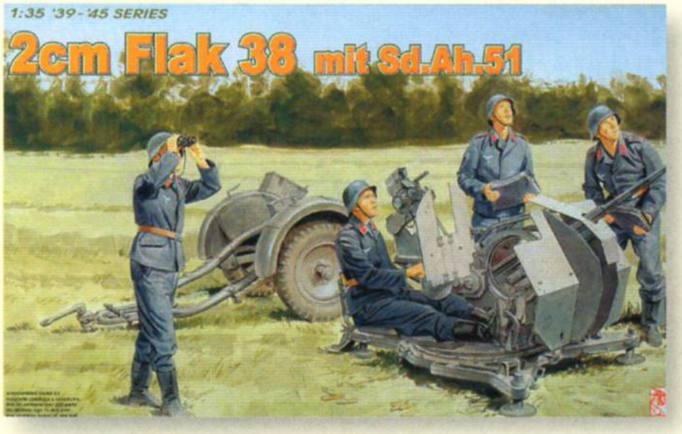

Probably the most ubiquitous German AA gun of WW2 was not the 88mm gun, but the small and highly mobile 2 cm family of guns. Found in self-propelled, towed, single and quadruple mounts, it was everywhere, used by all formations, and very popular. Most modern modellers would remember it from the end of the movie *Saving Private Ryan* where one is use to kill the Ranger sniper.

Designed by Mauser as a high-rate replacement for the earlier *FlaK 30*, the *FlaK 38* possessed a rate of fire of 420-480 rpm, but due to its 20-round magazines the practical rate of fire was about half that. Over 17,000 of both weapons were in service in 1944.

This has always been a popular weapon, and DML's entry ('39-'45 Series Kit No. 6288) is the fourth 1:35 scale, in plastic to come out following early efforts from ESCI (now Italeri) and Tamiya and the more recent Tristar offerings. But it comes with more options than any of the other ones and has some really well moulded bits to it.

The gun itself has a pre-bored flash hider and also a choice of three different breech assemblies - DML calls them 'barrels' which they are not, but the point is that they do offer three styles. A case with spare barrel moulded in place is also included, as well as at least four magazines and two ammo carrier cans. (All that is missing are shell casings, but that's pushing it in this calibre and scale!)

The gun can be built for free elevation, but that requires leaving out some parts. DML's answer is to provide different length elevation buffer rods and sight mounts so that the modeller can position the barrel at 0°, 20°, 40° and 60° elevations. The mount provides for free traverse. The gun shields are – as is now normal for DML – either plastic or etched brass, your option!

The *Sonderanhanger 51* trailer is nicely detailed, but with rather conventional tyres – none of the fancy sectional slide moulding for tread depth used on the 88mm or *PaK 40* kits. Nice touches overall include the provision of accessories for the gun such as the aforementioned gun case, two ammo cases with magazines, and a gizmo (!) which I am guessing is a loading device for filling magazines. A total of eight different units are offered, but all are basically paint jobs. A small sheet of decals is provided for 'kill' marks and data plates.

Overall this is a lovely kit – the surprising thing is that DML did *not* provide a crew with the kit! Since their figures set the standard, and this gun begs for a crew, I am surprised to find it does not have them. Maybe next issue... Thanks to Freddie Leung for the review sample.

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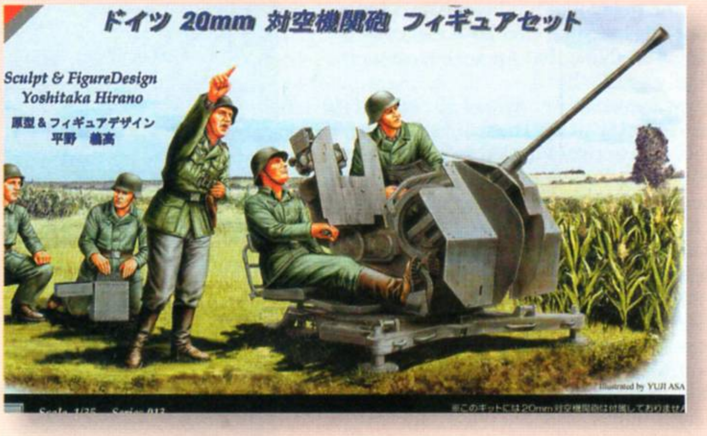
Tristar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Sculpt & FigureDesign
Yoshitaka Hirano
原型＆フィギュアデザイン
平野 義高

I had received these kits long before the DML *FlaK 38* kit was released (there was a delay while import licences were being worked out and product lines developed for sale in the US by MRC) but only now have word that MRC will release Tristar 1:35 scale Kits 35010 (the *FlaK 38* 2cm gun) and 35013 (the crew) in the same box as a 'limited edition' set - 'Kit No. 35010S; 2cm FlaK 38 with Crew Set'. Given the fact that Tristar kits in the US are not cheap, this is a genuine bargain at US $18 and should merit serious consideration.

The 2cm guns were among the most prevalent of the German AA weapons, and were found in a number of different towed and SP mounts, and in single and quadruple use as ground systems (and some naval mounts as well). They were marked by having a high rate of fire and good explosive rounds, and were probably responsible for many of the US 9th Air Force, close air-support and battlefield air interdiction aircraft lost in 1944-45. As such, they have been popular modelling subjects; this is the third kit to be released of this weapon after the late 1970s ESCI kit and early 1980's Tamiya model.

The gun itself consists of 89 parts in a mid-grey styrene on three sprues, and even includes a 'slide moulded' barrel with hollow muzzle. The parts are well done, but the fixing points on the sprues are heavier than most and speak to low rate production kits. There are ejection pin marks on the major parts, but they are either in inconspicuous places or easily removed.

I have to admit as my gun was a pre-release sample there was no instruction sheet that came with it, but the parts are pretty easily sorted out and the excellent artwork on the box top could be used in a pinch to assemble the kit. This kit does not have the details of the DML offering, also reviewed in this issue (see above), but it has free elevation so many modellers will be happier with that (one good thing about free elevation on an artillery piece is that it means fewer broken barrels if snagged or the 'gefingerpokener schlumpfen' twang it at a show to see what happens!)

The *Sonderanhanger 51* is good, but uses one-piece wheel and tyre assemblies and simplified mounting bits. A spare barrel case and what appear to be canvas ammunition cases are also provided with the kit, as are four ammunition magazines.

The figures are not bad, about on a par with the early DML types and much better than the Tamiya 'dwarves' of 20 years ago or the awful ESCI crews. They are a bit soft in some areas, but appear to be quite serviceable and will paint up nicely. They are all wearing the standard field uniform, a good idea unlike the unfortunate DML choice of winter wear for their 8.8 cm *FlaK 36* crew. There are even 'hobnails' on the bottom of one of the 'other number's' boots! A small decal sheet is provided for marking the gun and magazines. Three different options are provided – grey, sand and whitewash.

Overall this is a nice kit and, coming with a good crew is an advantage. If I were to rank the four kits, it would be DML first and this kit second – especially as it comes with the crew. The Tamiya is third, and the ESCI/Italeri one last, mostly due to their obsolete crew figure sets and simplified guns.

Thanks to Bob Lewen of MRC in the US for the review sample. For UK modellers Halifax Modellers World, 55 The Arcade, Piece Hall, Halifax HX1 1RE. Tel/fax: 01422 349157 have the gun and crew as separate kits in stock, prices: gun 35010 £12 and crew 35013 £10.

Cookie Sewell

Prices in text

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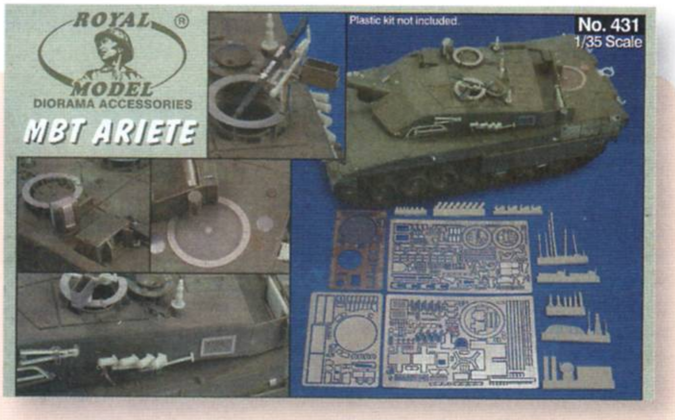
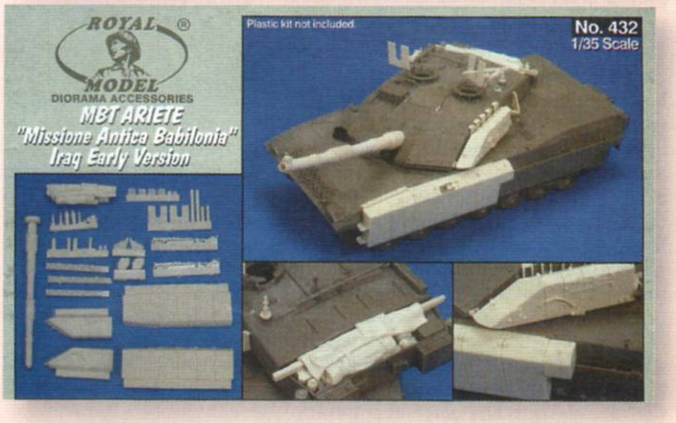
www.tristarmodel.com

Royal Model



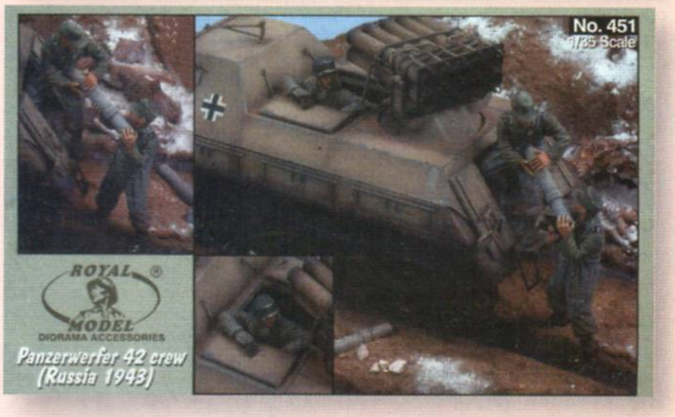
SB Models have informed us that they are now the sole UK distributors of Italy's Royal Model Diorama and Accessories range, and have sent a selection of some of the latest releases into this large range of products for review. It is quite a long time since Royal Model have appeared in "Atten-shun!"

Trumpeter's 1:35 scale kit of the Italian MBT the C-1 *Ariete* (Kit No.00332) naturally receives the update treatment from an Italian manufacturer and SB have sent us five different items intended to detail and transform the Trumpeter kit. Royal Kit No.431 (£25.99) has four, photo-etched frets and polyurethane resin parts to replace Trumpeter parts and add details, whereas Kit No.432 (£29.99) is all resin and provides a replacement gun barrel and add-on armour panels for another version - *Missione Antica Babilonia* - Mission to Iraq - the earlier version! The *Ariete* gun barrel is available separately as Item No.433 (£7.99) as is a set of add-on armour panels, for the later version as Item No.434 (£7.99). Three tank crew figures for the *Ariete*, (*Missione Antica Babilonia*), two half size figures for the turret hatches and one head and shoulders for the driver comprise Item No.444 (£13.50). And Royal Models' resin castings *are* excellent quality, evident in these figure and accessory kits.

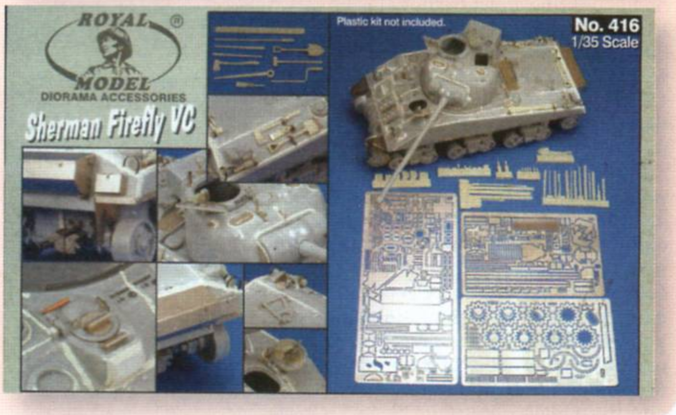


Reverting to the period of the Second World War, a crew for the *Panzerwerfer 42* (an armoured *Maultier* half-track chassis is shown on the box top) Russia 1943 has three complete 1:35 scale figures, one kneeling to fit into the open hatch in front of the rocket launcher (or elsewhere?) and two men posed to manhandle a *15cm Nebelwerfer* round into the vehicle via the rear doors, Item No.451 price £24.99.

Dragon's 1:35 scale injection moulded plastic kit of the British Sherman Mark VC Firefly (No.6128) gets the detail treatment in Royal Models' Item No. 416, price £27.99. The box has comprehensive fitting instructions for the multitude of parts on three photo-etched frets and an extensive line up of cast polyurethane parts to replace and add detail to Dragon's model, with separate pioneer tools and features such as tiny factory casting numbers! Detail fans will love this collection of bits, though I think photo-etched 'fancy' drive sprockets is taking things a bit too far. There is also an additional and separate 'extra' item still on the Firefly theme - the armoured box for the radio on the turret rear has been issued separately as Item No.430 £4.25, but this lacks the circular panel covers found on the etched fret in Item 416! (Note that square covers were also used on the top of the Firefly's radio box!)



Item No.399 (£12.50) is an update set for Tamiya's 1:35 scale US 40 ton Tank Transporter Dragon Wagon (Part 3). The real Dragon Wagon had a chain drive on its pair of two-wheeled rear bogies on the tractor unit and Royal's kit has cast white metal cogs and photo-etched chains to detail the model. There is also a set of smaller chains and white metal cogs to fit onto the big winch unit on the tractor. Obviously part of an extensive set of detail kits for the Dragon Wagon adding this lot would certainly pep up what is essentially, both above and below the chassis, a very complicated piece of equipment - it almost looks like clockwork on the original and these tractors were very messy in operation leaving oil deposits on any road surface over which they travelled. There are also resin and photo-etched parts to assemble up into a jig to cut plastic rod.



What we've highlighted here is only a smidgen of Royal's vast range of models and accessories. Full details of the range are available from their sole UK Importer, SB Models, PO Box 114, Barrow in Furness, Cumbria LA13 0WY. Tel/fax: 01229 430749,

Ken Jones

Prices in text

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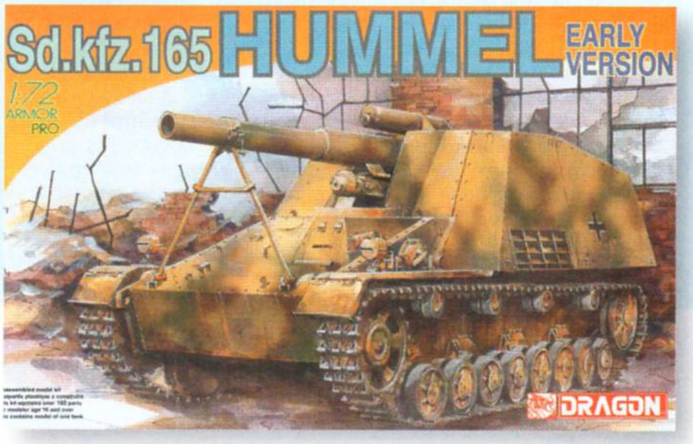
http://www.royalmodels.com

Dragon Models Ltd

Last summer DML released a pair of 1:72 scale *SdKfz 164* kits, first a *Hornisse* and then the later *Nashorn*, using the *Gw III/IV* chassis. The kits apparently proved popular, and now the first of the *SdKfz 165 Hummel* kits using the same chassis has been released as Armor Pro Kit No.7244; *SdKfz 165 Hummel* Early Version. This is the early model 'pulpit' style driver's compartment version, and the main difference between it and the *SdKfz 164* is the 15 cm gun and mount. The new gun comprises 23 parts, several of which meet my RP (right puny) criteria and will need to be handled with care.



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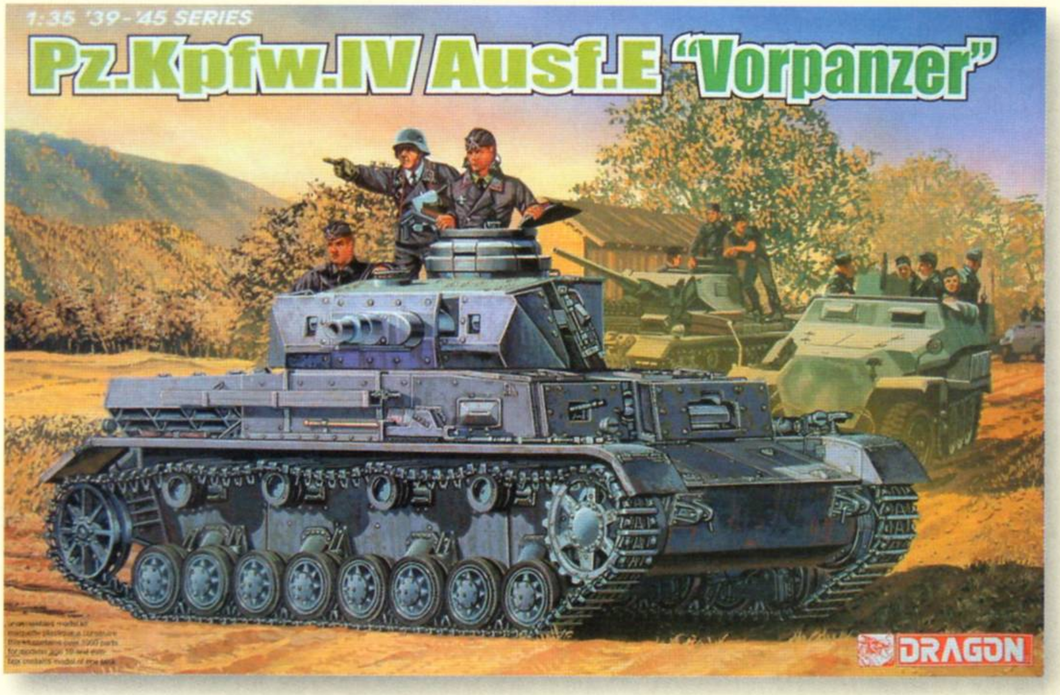

There are times when some of the kits really tend to stump me, and this is one of them. While it has some other history to relate, I must say I have never heard of *PzKpfw IV* tanks fitted with 'cheek' armour for close assault (which is what the *Vorpanzer* or forward armour would seem to mean.) On the other hand, this is another nice version of the *Ausf E* variant. (I get the feeling from the markings that they were actually 'OPFOR' type vehicles designed to simulate Soviet tanks but that's just a wild guess!

The *PzKpfw IV Ausf E*, which came out in September 1940 and was produced through April 1941, was one of the first models to take combat results into account. It was found early on that the *PzKpfw IV* was too thin-skinned to stand up to anybody's antitank guns, and with this tank it got an increase to 50mm on the bow plate and 20+30mm on the upper glacis, as well as a new visor for the driver to give him more protection. Hatches were countersunk against ricochet damage, and the turret rear was redesigned to incorporate the redesigned commander's cupola and eliminate potential shot traps or weak spots in the hull rear. Later, more appliqué armour protection was added to the lower hull sides and suspension units to protect against antitank guns and mines. A total of 206 chassis were built – 200 as battle tanks, four as prototype bridge launchers, and two more as experimental chassis. (I again admit I have no idea of how many were fitted with the 'cheek' armour.)

DML was stung by some harsh criticism of its *PzKpfw IV Ausf E Afrika Korps* kit (No. 6264) as some 'experten' on the Internet faulted it for dimensional errors and other problems. As a result, DML sent two of its Japanese researchers to Aberdeen Proving Ground and the Ordnance Museum to re-verify their measurements from the *PzKpfw IV Ausf E* in the museum's collection. This kit reflects any changes they felt had to be made and, therefore, it sports some new parts – 166 of them. Note that most of them are either upgrades to previous parts or as in the case of the assault armour new and specific to this kit in the '39-'45 Series - No. 6301.

Again, as noted with the previous *Ausf E*, I want to warn modellers that this is a VERY complex kit, and comes with a large number of options which are called out in the directions. As with all recent DML kits, many of the parts are redundant and offer the modeller the choice of either styrene parts or etched brass. DML is one of the few, if not the only, company to offer this; others either assume you will buy their sets aftermarket and replace kit parts, or give you no option but to use them from the start. Since a good number of modellers still are a bit leery of etched metal due to tales of vanishing parts or problems in attaching them, it gives the 'retention challenged' (e.g. the guy who loses 'itty bitty' parts!) modeller a fighting chance.

The kit also comes pre-sectioned for detail fans who want an interior. All hatches are separate parts and some interior detail is included, including a very complete turret basket and 7.5 cm L/24 gun; this has a choice between a 'slide moulded' styrene barrel or a turned aluminium one. A very detailed 21-part commander's cupola is also included for the turret. There are other details here that need to be seen and appreciated (Mig fans will be happy) such as the geared turret race.

The model just abounds with details. Each of the suspension bogies has 18 parts (19 with protective armour cover) with separate tyres for painting. Safety chains are provided for the towing shackle mounts as they have separate pins too. Two sets of engine deck doors are provided (early/late model and Africa) along with etched inserts for those who wish them.

This detail takes a good jeweller's loupe to see – there are two DIFFERENT sets of 'Magic Track' links, one for the left side and one for the right, as they replicate the different sides that the track pins are inserted from for holding the track together! Alas, DML did not identify which bag is which, so I hope you at least keep them on the correct sides! (Think hard on the types of judges at shows who are going to have to use an 'IPMS Death Ray' – penlight – and 10x jeweller's loupe to check on that – payback can be fun!) (DML does tell you that the fastener side goes out and the smooth head goes in, as there is a 'knocker' to keep them in place if the fastener fails. They don't identify which bag is which, though, so you have to sort it out.)

Markings and finishing directions are included for five different vehicles: two from *Pz.Ers.Abt. 5*, Germany, 1942; *Pz.Ers.Abt. Nimes*, 1942; *Panzer regiment 31*, Russia 1942; and one from *Pz.Ers.Abt. 4*, Germany 1942; the first four are Panzer Grey and the last one is *Panzerbraun*.

Overall this is a nice kit if somewhat curious, but it should be popular as you can do up a good straight *Ausf E* from it. Thanks to Freddie Leung for the review sample. Dragon kits are imported into the UK by The Hobby Company Ltd., Garforth Place, Knoll Hill, Milton Keynes MK5 8PH.

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sales@hobbyco.net
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Cookie Sewell

Price: £29.99

Dragon Models Ltd., 603-609 Castle Peak Road, Kong Nam Industrial Building, 10/F, B1 Tsuen Wan, New Territories, Hong Kong. Tel: 2493 0215. Fax: 2411 0587. info@dragon-models.com www.dragon-models.com

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I am no expert on the *Hummel*, but the interior seems a bit Spartan and I see no sights or other kit for the *Hummel* which I recall being there, so am sure someone will come to the rescue later on. However, what is provided seems accurate according to the references I have, so if DML has committed any mistakes they are those of omission and not commission, which is easier to fix later on. The kit comes with pre-bent spare wheel brackets from wire as well as a choice of etched brass or plastic radiator exhaust grilles on the sides of the casemate. It also uses DML's DS plastic tracks, which are cut a bit long to allow for sag.

Decals and finishing options are provided for five guns: unidentified, Eastern Front 1944; two from *Das Reich*, Normandy 1944; unidentified, Eastern Front Winter 1944; and one from the 5th Panzer Division, Russia 1944. Overall this is a nice kit and shows DML continues to meet the needs of small scale modellers.

Thanks to Freddie Leung for the review sample. Dragon Kits are available in the UK from The Hobby Company Ltd., Garforth Place, Knoll Hill, Milton Keynes MK5 8PH. Tel: 01908 605686.
Fax: 01908 605666. sales@hobbyco.net enquiries@hobbyco.net

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Price: £8.99

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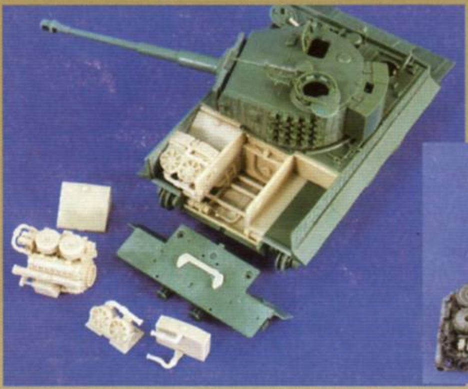


2267 Tiger I Rear Compartment (Skybow) 1:48

Kit Contents

2264 House Ruin Italian Style 1:35

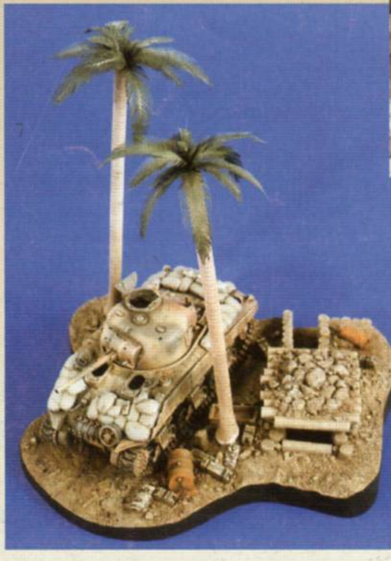
2266 Jagdpanther Interior
(Tamiya) 1:35

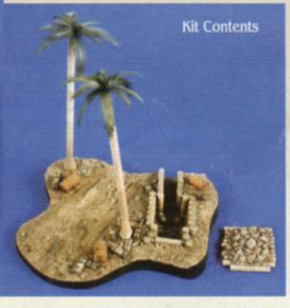
2269 German Tankers Chow Time
(4 Figures) 1:48

2263
German Tankers
1:35

the world in scale

2268 Pacific Diorama Base 1:48





2270 Soviet Casualties WWII
1:35

2265 Trough The Hatch Stug III (Tamiya) 1:48

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